

# ATLANTIC FISHERMAN

Registered

Vol. I.

MAY, 1921

No. 4



III n.e.



## The Esperanto

The winner of the 1920 International Fishermen's race was equipped with

## Columbian Tape-Marked Pure Manila Rope

Out to win, the owners of the Gloucester schooner chose the equipment that had already proven its trustworthiness on "The Banks" and the results fully justified their choice.

Columbian is the proven rope, the one with the red, white and blue *Tape-marker* guarantee.

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# Motors For Fishermen!

## KNOX

### MODEL "G" Valve-In-Head MOTORS

6 and 8 HP. single cylinder  
12 and 16 HP. double cylinder

#### Power and Consumption at 600 R.P.M.

6 HP. 5/10 gal. per hr.,  
HP. developed  $6\frac{3}{4}$

8 HP. 7/10 gal. per hr.,  
HP. developed  $9\frac{1}{4}$

12 HP. 1 gal. per hr.,  
HP. developed  $13\frac{1}{4}$

16 HP. 1-4/10 gal. per hr.,  
HP. developed  $18\frac{1}{2}$

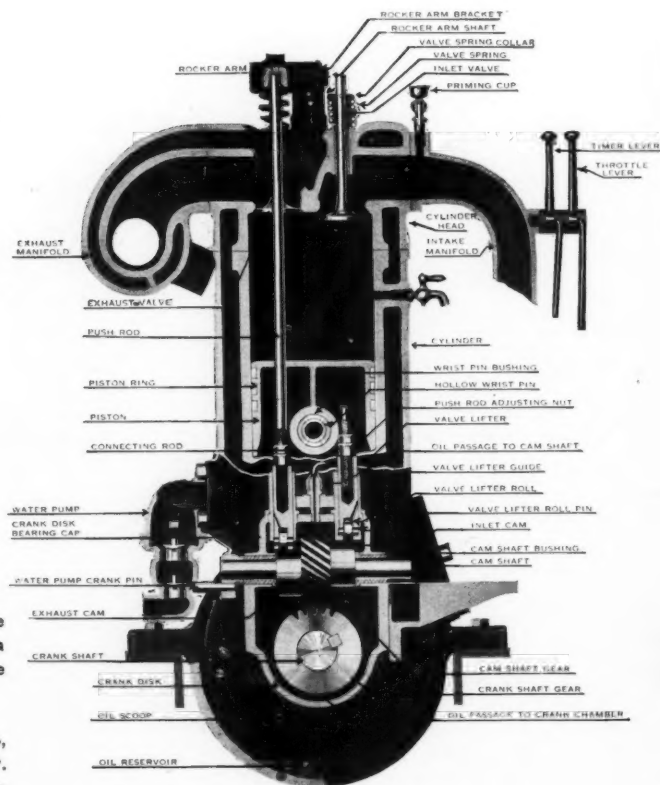
#### OTHER KNOX MODELS

Model "E" two cycle medium duty one and two cylinder, 3 to 15 HP. It was a motor of this type that propelled the "Sea Bird" across the Atlantic.

Model "F" four-cycle heavy duty, two, four and six cylinder, 25, 50 and 75 HP. The motor that won its reputation in the coast survey service.

RALPH H. WILSON, a lobster fisherman, located at Cribhaven, Me., wrote us, in part, as follows:

"The 12 H. P. Model 'G' KNOX Motor, together with the KNOX Lobster Hoist, that I have installed in my boat has given me the best of satisfaction. I consider my KNOX Motor superior to any motor in these waters."



Cross Section View, Flywheel End

**We build Lobster, Scallop, and Cargo Hoist; Commercial Boats  
of all types up to 100 foot overall**

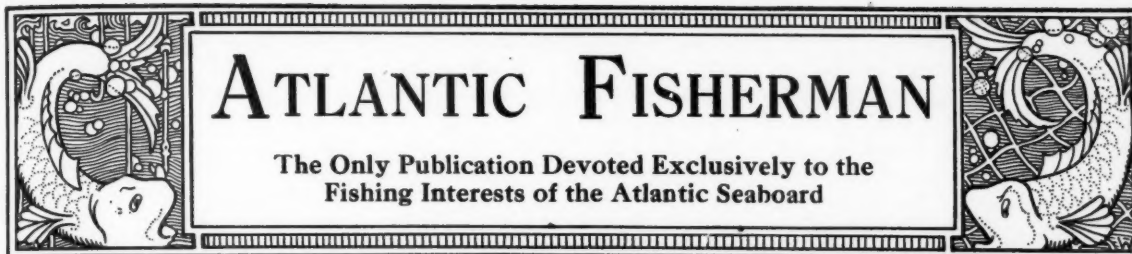
*Our catalogue will give you full details*

## Camden Anchor-Rockland Machine Co.

New York Representative  
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CAMDEN, MAINE, U. S. A.

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100 Atlantic Ave.



## Putting Over Fishcakes

### The Creation of a New Market for Codfish—Results of Modern Merchandising Methods Applied to Fish Business

**T**HAT the fish business holds abundant promise for those wise enough to team it up with proper merchandising methods, is strikingly evidenced by the following story of the "putting over" of Ready-to-Fry fish cakes.

Toward the end of the war, when food prices were still soaring, the big Gorton-Pew Company began casting around for a new, economical fish dish that would find a place in the weekly budget of the hundreds of thousands of households the country over that were troubled with rising prices of meat and other food staples. That there was need for such a dish seemed likely enough; but to find the right one was a problem that loomed large and foreboding. This fish dish must be suitable in every way, and yet one not already on the market.

The company was keen enough to sense the danger of jumping at something that was a mere probability, even thought it might bear every evidence of being a winner; for if the new line failed, its failure might create a backfire that would injure the company's old established lines. Therefore, guesswork in such a case would be too great a risk.

There seemed to be plenty of fish—fresh, cured and canned—on the market, and the possibility of evolving something along the old lines that would prove a good seller seemed decidedly remote. Fresh fish ran up against transportation problems. Salted fish was flooding the market because of prohibitive export conditions; and, besides, it required work of the housewives for its preparation. Another difficulty that demanded consideration was the custom of serving fish one day a week, even at only one meal. Something must be found which would be so good that it would over-ride all these difficulties.

Obviously the sought-after dish was one that would not add to a woman's work—one that would make an attractive meal at a moment's notice, and one that could be sold at a low price. The shelves of the provision stores seemed to indicate that the

field was pretty full, yet in their great variety they did not suggest just the thing the Gorton-Pew people were groping for.

After considerable investigation and consideration the thought of inventing some new fish dish was postponed, and search was begun among the popular old-time stand-bys and favorites.

Sifting them all down, the codfish cake stood out as the most likely looking article. Still, in a proposition like this, with so much at stake, nothing could be accepted as a sure bet. Would women, who had always made their own fish cakes, buy them ready-made? Were there so many varieties of taste that a single formula could not be evolved that would find general favor? Again, did the majority of housewives make fish cakes from left-over fish; and might not the success of a ready-to-fry article react disastrously upon the demand for the established lines?

The only way to answer these questions seemed to be the working out of a broad, elaborate scheme of investigation. Such an investigation was started, and the collecting and reducing of data covered a period of two years, and cost a great deal of money. Yet the cost was far more than saved in securing at first hand information that eliminated the gamble, enabling the company to take every step with absolute certainty of being on the right trail.

No fewer than 10,000 women, representing every state in the Union, were consulted through the mails. The questions these women were asked covered every phase of the use of codfish cakes in the home. Recipes were asked for, the number of times such a dish could be served during the week, at what meal or meals, what kind of package should they be packed in, and other questions of a similar nature.

The answers showed conclusively that codfish cakes would not only be popular but that in a great many instances they would be welcomed as a new and handy breakfast and supper dish, which might be served on an average two or three



times a week. Many of the women sent their own recipes, and from these was deduced the standard recipe—half fish, half potato.

In experimenting with the actual product several new difficulties arose and had to be overcome. Special machinery would also be necessary to pursue the enterprise extensively. It was found that some potatoes did not retain their whiteness after processing. After trying practically every kind of potato in the country the choice went to the mealy Maine variety which remained snow white under the exacting conditions. The right method of cooking was also solved in these experiments. It was proved that best results were obtained by boiling the fish and potatoes together. In the end the codfish cake got to the point where it could be made, finished and packed without once being touched by hand, except for digging out the "eyes" of the potatoes. The correct proportions of fish and potato are started through the machinery, emerging later in enamel-lined cans which are processed and automatically sealed.

Even at this stage further tests were made. Two thousand cans were sent to homes in two cities of every state, together with a questionnaire asking for opinions as to flavor, convenience and price. Thus the correct seasoning was settled upon and the matter of size of can and price were verified.

Having established the soundness of every step in the enterprise, manufacturing was begun and orders began coming in from all sections of the country. Last year the Gloucester fish cake plant was turning out over 30,000 cans a day, the equivalent of something like \$720,000 worth of business a year.

The method of marketing was somewhat unusual, especially so as applied to the fish business, which has been notoriously backward in adopting modern merchandising methods. In the first place, it was decided that the fish cake business would be run as a new enterprise by a new firm so that it would not interfere with the fish trade in the hands of the jobbers. A corps of specialty salesmen started out to visit the largest cities of the United States. The prospective advertising campaign was outlined by them to the dealers, and on the strength of this orders were taken. As soon as the city was stocked, the full-page advertising in the local newspapers was begun.

Here, again, tests were made of the advertising copy for newspapers. Twelve moderate-sized cities were selected and a preliminary advertising and selling campaign was conducted. The result was a phenomenally large business in each of the 12 cities. It is interesting to note that one piece of copy has proved sufficient to put over the new fish dish. A detailed campaign has been prepared, but is still waiting to be used when the plant can take care of the demand. New units are being added to the factory as rapidly as possible. As the output permits, more cities will be covered.

Altogether, it has been found that this new

leader has set a faster pace in the company's cured-fish business than has been felt during any similar period of the 60 years the company has been in existence. So marked has been the success of the ready-to-fry codfish cakes, the Gorton-Pew Fisheries Company says they are the first of probably a dozen canned sea-food products which the company hopes to develop and put upon the market.

## TWO BOSTON TRAWLERS OPERATING

### Bay State Fishing Company Resumes on Open Shop Basis—Foreign Trawlers Take Advantage of Tie-Up

**A**FTER waiting two months for the Fishermen's Union to accept the wage schedule of \$45 a month, with a bonus of 10 per cent. on fares up to \$4,500, and an additional 5 per cent. on all catches which stocked above that sum, offered by the Trawler Owners' Association, the Bay State Fishing Company put in operation two of its steam trawlers, Comber and Tide, on an open-shop basis.

This action would indicate that the wage adjustment conferences between the Fishermen's Union and the trawler owners have met with little success. Although the union is said to have made a counter offer of \$60 a month with a bonus line of \$3,500, the trawler owners declare that conditions would not permit of paying more than their original offer.

Despite the failure to reach an agreement, and the Bay State Company's decision to operate under open-shop conditions, there has been no trouble, such as usually attends a break of this nature.

Resumption of operations by the Bay State Fishing Company was probably actuated in a large measure by the high price of haddock, which has been bringing \$7 to \$8.50, due to small receipts of this kind of fish. While there is an undeniable shortage in groundfish, due to the trawler tie-up, the renewal of operations of the combined beam trawler fleet of Massachusetts would undoubtedly lead to a repetition of the undesirable conditions which prevailed in early spring, when the glut of fish reduced prices to a point that made it unprofitable to fish. Unless adequate marketing methods are planned in advance, such a movement would seem to be altogether uneconomic.

During the local steam trawler lay-off the Canadian beam trawlers have been taking advantage of the high prices, and have landed many fares at New England ports. Later it is expected that a fleet of four Iceland trawlers will also take advantage of the situation, overtures having already been made to Gloucester concerns looking toward an arrangement for selling catches. Iceland trawlers in considerable number will also operate out of Nova Scotian ports this summer, and doubtless will market many of their catches here.



# A Standardized Lobster and Fishing Boat

Popular Craft a Model of Efficiency—Flexibility of Power Plant  
a Distinctive Feature

**A** LONG with other businesses the fishing industry is becoming a highly developed occupation demanding modern methods and equipment for its successful exploitation. Fishermen as a class are becoming better business men, recognizing the fundamental fact that competition can best be met by the adoption of equipment that will show the great-

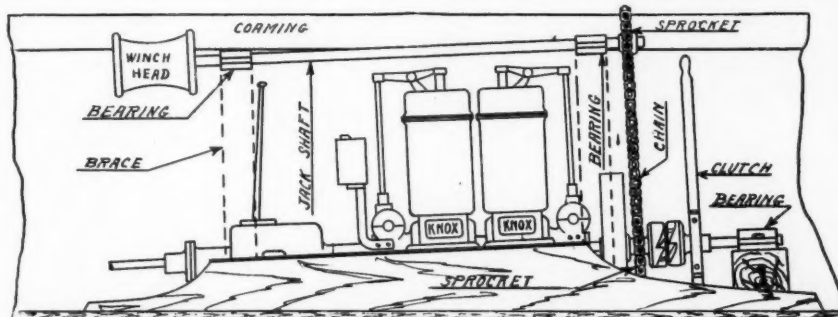
tended type, which is quite generally used in the Swan's Island section. However, the standardized boats are built with the stern  $1\frac{1}{2}$  inches in from plumb, the top being protected by the guard which extends around the complete boat. This type is generally preferred by the fishermen. While these crafts are primarily lobster boats for use in the spring,

purpose. Many lobster fishermen, who do not use their boats at any time for hand trawling, have a trunk cabin built on forward fitted up for sleeping and cooking.

The fact that the Camden Anchor-Rockland Machine Company are the manufacturers of both boat and power plant assures a perfect relationship of the two units. The convenient location of the builders with respect to the Atlantic lobster belt promises the operator quick service in case of accident to either boat or engine.

## The Power Plant

The flexibility of the power plant is a feature that has been worked out carefully, and commends itself at once to the experienced lobsterman. The lobster hoist is usually installed on the port side of the boat opposite motor, and consists



CROSS SECTION SHOWING CHAIN DRIVE LOBSTER HOIST

est return for the time and labor expended.

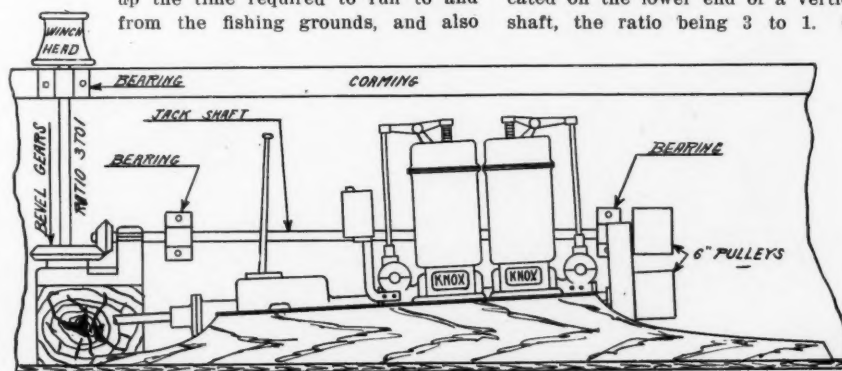
The need of efficient working equipment is particularly evident in the lobster fishery, which today demands the covering of very extensive territory because of the scarcity of lobsters. It has been said that the combined lobster fishery of Maine—if prosecuted as of old, in row boats and with old style gear—could not produce supplies sufficient for the needs of a single big New England lobster dealer.

Just as the motor-driven boat has replaced the oar-propelled craft, so must other expedients supplant the present slower methods, if the fisherman is to hold his own against a dwindling supply.

Realizing the demands of the lobsterman for time and labor-saving equipment, the Camden Anchor-Rockland Machine Company of Camden, Maine, has developed and standardized a 26-foot boat which is finding great favor among the fishermen of Maine. The illustration shows a boat built for John Kent of Swan's Island, Maine, the stern or transom being of the ex-

summer and fall, they are well adapted for hand-trawling during the winter months. They are built especially to stand up under the heavy service required of them, and have already proved themselves very seaworthy; yet they are capable of a speed of from 10 to 12 miles an hour. This unusual speed means much to the fisherman. It shortens up the time required to run to and from the fishing grounds, and also

of one horizontal shaft running fore and aft in two bearing boxes attached to boat. The forward end of shaft is fitted with a 6-inch pulley which is driven by a belt running off from a 6-inch pulley located on the forward side of the motor fly wheel. The aft end of the horizontal shaft is fitted with a bevel gear which meshes into a bevel gear located on the lower end of a vertical shaft, the ratio being 3 to 1. On



BELT DRIVE LOBSTER HOIST

enables the fisherman to cover more territory during the working day. When used for hand trawling the forward cockpit is fitted up with kit boards for taking the fish. The fisherman handling the trawl stands in the forward end of the cockpit, which is especially designed for this

the upper end of the vertical shaft is located a special winch head made of hard wood for taking the warps. This vertical shaft runs in bearing boxes attached to the sides of the boat.

The power plant and hoist are boxed in complete as shown in the

cut accompanying this article. The box is so arranged that the operator can easily get at the motor and all the working parts when the occasion requires. On the aft end of the box is located the steering wheel as well

boat. After the warps are thrown overboard, the operator throws the propeller into gear and slowly moves forward to pick up the next trap. The motor is sufficiently flexible to do this work without trouble.

sprocket chain as is used in many instances.

#### Power Specifications

Twelve h. p. two-cylinder Model "G" Valve-in-Head Knox motor fitted with reverse gear self contained in base, mechanical oil pump, high tension magneto, independent timer and Knox Model "F" Automatic carburetor. Propeller outfit, bronze throughout; waterpipe and fittings, brass; exhaust outfit, iron and steel; gasoline tank, galvanized iron, capacity 30 gallons; gasoline tubing, copper fitted with strainer and shut-off valve. While the builders recommend their 12 h. p. motor for these boats, they are in position to furnish smaller power if requested. The 12 h. p. Model "G" Knox motor will consume less fuel than the 5 to 8 h. p. two-cycle motor now generally used by the fishermen.



10 TO 12 MILES AN HOUR WILL COVER A LARGE NUMBER OF TRAPS IN A DAY

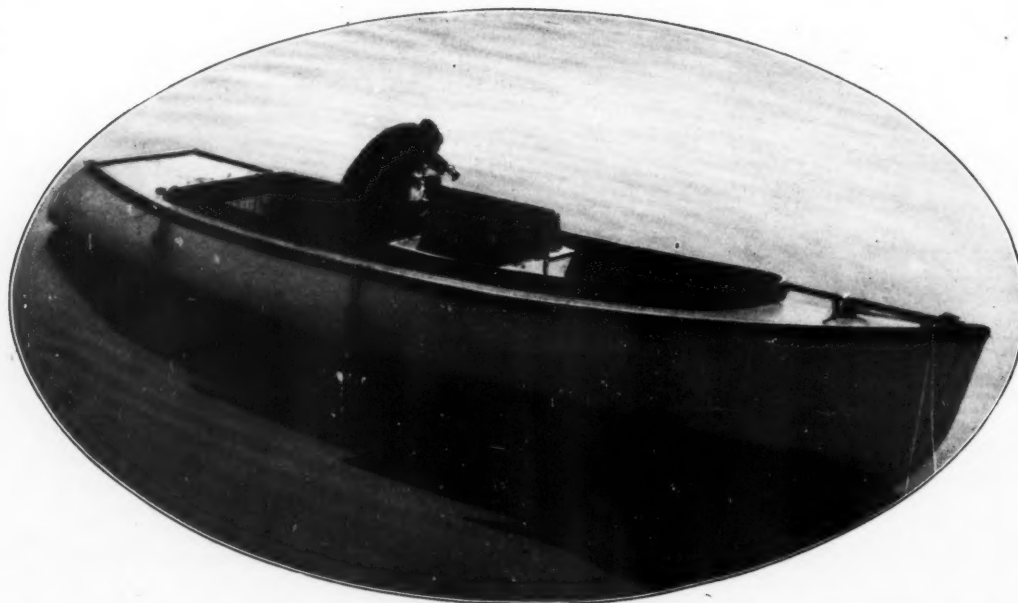
motor. This allows the operator to handle the boat, handle the motor, and operate the lobster hoist without changing position.

When operating the hoist, the propeller drive is thrown out of gear, and the motor is slowed down to a speed that will enable the operator to handle the warps on the winch

The old-fashioned method of stopping and starting the motor when pulling each trap is done away with. Neither is it necessary to install in the boat an independent small engine for handling the hoist. When the hoist is not in use the belt is thrown off the driving pulleys. The fender rails and coamings are pro-

#### A NEW APPOINTMENT.

Capt. Osmond Cunningham has been appointed captain of the coast guard station at Salisbury Beach, Mass., succeeding Capt. W. A. Charles, resigned, and has taken up his duties there. Capt. Cunningham comes from Provincetown, where he was on duty in the office of the su-

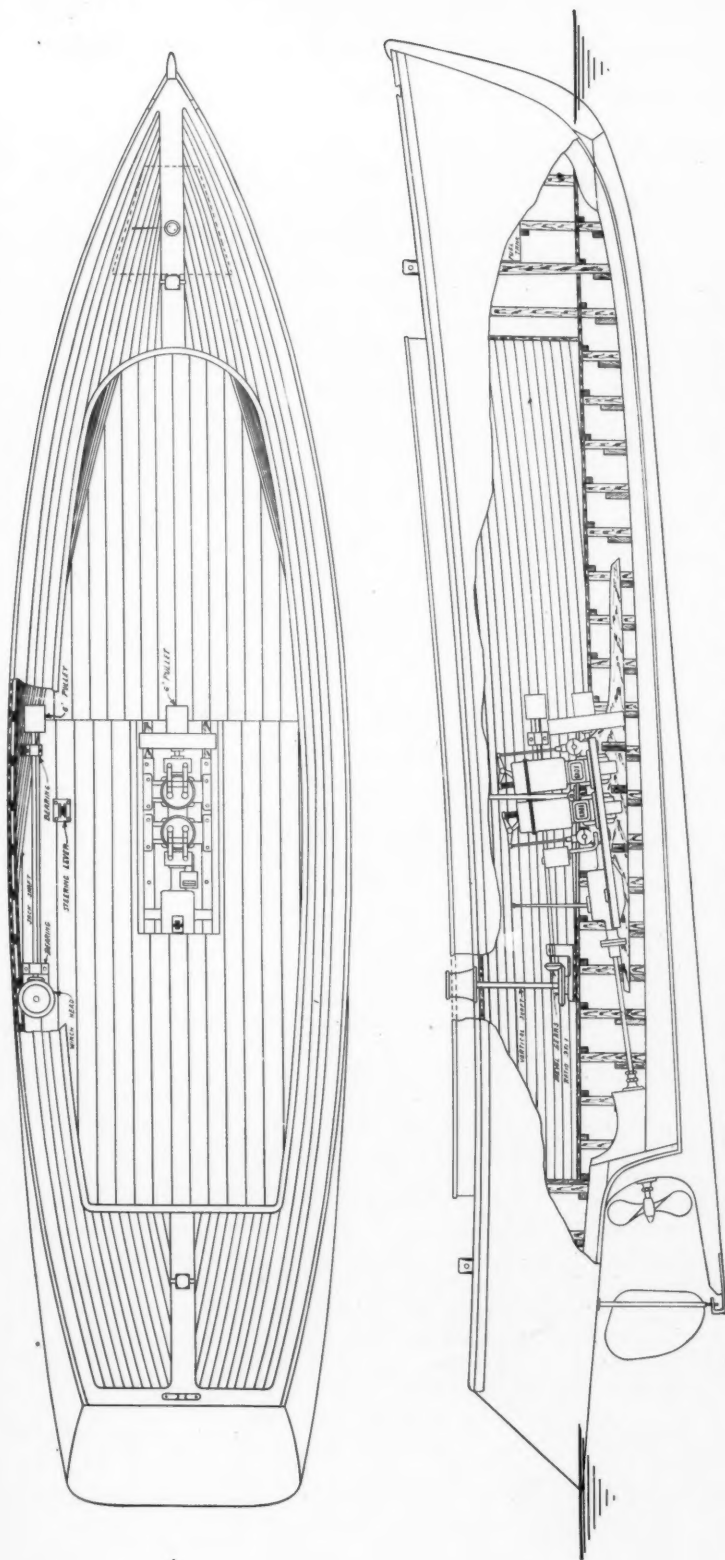


OPERATING LOBSTER HOIST. NOTE BOX HOUSING MOTOR AND CONVENIENT LOCATION OF HOIST AND STEERING WHEEL

head. The coamings on the boat are low, and the wash boards are extremely wide thereby enabling the operator or fisherman to easily handle his traps on the side of the

ected by half-oval galvanized iron. The accompanying cuts illustrate a Knox lobster hoist when operating on a belt as above described, also when operating by means of a

perintendent of the district. Previous to that he was connected with the stations at the Isles of Shoals and Rye Beach, N. H. He has been in the service 12 years.



26' x 7' FISHING BOAT AS USED ON MAINE COAST FOR LOBSTERING AND TRAWLING.

Length overall 26 feet.

Beam 7 feet.

Freeboard forward 3 feet 3 inches.

Freeboard aft 2 feet 3 inches.

Length of deck forward 5 feet.

Length of deck aft 2 feet 6 inches.

Keel, stem, deadwood, keelson, shaft log and stern, selected Maine oak, 3 inch sided.

Clamps, North Carolina pine, 1 1/4 inch x 2 1/2 inch.

Shelf, North Carolina pine, 7 1/4 inch x 1 1/4 inch.

Washboards, selected Maine oak, 8 1/4 inches x 3 1/4 inches.

Timbers, selected Maine grey oak, steam bent 1 inch x 2 inches spaced 12 inches on centers.

Stern board, selected Maine oak, 1 1/4 inch moulded to shape of boat.

Engine bed, Maine oak, 3 inch sided running well fore and aft.

Coaming, Maine grey oak, 3/4 inch.

Deck beams, Maine grey oak, 1 1/4 inch x 2 inches, spaced 12 inches on centers.

Ceiling, Maine spruce, 1/2 inch.

Cockpit floor, Maine pine, 3/4 inch.

Bitt, Maine oak, 2 1/2 inches square properly stepped into keel.

Planking, selected Maine cedar, 3/4 inch.

Fastenings, galvanized iron throughout.

Rudder, Maine oak.

Chocks and cleats, galvanized iron.

Steering wheel, galvanized iron with oak handles and drum. Steering line, galvanized flexible steel.

The standard boats are built with the stern 1 1/2 inch in from plumb, not with extended transoms as shown in the cuts.

#### FINISH (Outside)

Planking below waterline properly smoothed out, filled, and covered with two coats composition paint.

Planking above waterline properly smoothed out, filled, and covered with two coats marine white paint.

Rub rail, decks and coaming properly filled and rubbed down, and covered with two coats of marine varnish.

#### (Inside)

The interior of the boat properly rubbed down, filled and covered with two coats of battleship grey paint.



# New Fishermen Off to Banks

**Mayflower and Canadia Make Good Showing — Some Question as to the Ability of Bluenose —  
Massachusetts Vessel Still Criticised**

**D**URING the past few weeks the new schooners Mayflower, Bluenose and Canadia, possible contenders for the Halifax Herald Cup, received their finishing touches and put off for the Banks to get down to their regular jobs of fishing.

The Mayflower, the last to be launched, required some speedy work on the part of the rigger to get her in shape before the first of May. However, in spite of adverse weather she was sparred and rigged and had her sails bent on in seven days, thus permitting her to sail for the Banks within the time limit set by the Racing Committee.

The trial trips of all three vessels were in the main satisfactory, though there have been conflicting reports regarding the performances of the Bluenose. Sailing from Halifax on her way to the Banks, in company with other fishing vessels, she is said to have led them all by a wide margin. Other reports have it that the Bluenose has been hopelessly beaten by no less than four fishermen of the Lunenburg fleet. Some say that because of objections to her design advanced by some of her stockholders, changes were made that have resulted in a radical departure from the original design of W. J. Roue, and that much of her speed has been sacrificed.

The Shelburne vessel, Canadia, is in danger of being barred by the Canadian committee from the elimination races because of a reported waterline length in excess of the maximum of 112 feet. However, since the American members of the Race Committee are represented as willing to waive this point, she may be let in as a contender. The Canadia has proved very fast, surpassing all expectations.

The Mayflower, in a very stormy passage from Boston to Shelburne, showed herself the staunch, able, speedy vessel promised by her owners and builder. She led the new schooner, L. A. Dunton, which met with her off Gloucester, by seven hours in the run to Nova Scotia.

Most of the distance from Gloucester was sailed in thick fog, and for the 500 miles of actual sailing, never once was the wind other than dead ahead. Hard squalls were encountered, from which an idea of her seaworthiness could be obtained. Off Seal Island, with a 30 to 35-mile wind and a lumpy sea, she threw water 50 feet each side of her without one drop coming over her bow. It is figured that in a fair 25-mile breeze she will reel off 18 knots. So much for her speed.

A. H. Howard of New York, owner of the Elizabeth and the Louise, two fishermen that have shown something unusual in the way of speed, has extended an invitation to the Mayflower owners to use his vessels for trial horses. These New York

vessels are East Boothbay products and are both practically new. The Elizabeth has already shown 16 knots an hour.

Altogether, some excellent sport is promised for this autumn. Gloucester seems to be taking a little different attitude, and will undoubtedly be well represented in the American elimination races. It would not be surprising to see several of the fast Newfoundland bankers from the southwest coast in the Canadian trials. Already this great maritime country is planning to build a new vessel for the 1922 event. Norfolk, Va., has recently requested the waiving of the clause in the regulations which limits the time of entries, so that the construction of a vessel to represent that port this fall might be started. In refusing, the committee suggested that a vessel be built for 1922. This communication, by the way, suggesting that the Norfolk people build for 1922, knocks in the head the proposed amendment to the Deed of Gift to the effect that only vessels of five years or more of actual fishing be eligible.

The mass of criticism, largely unfounded, that has been directed at the new vessels is the only unfortunate feature of the early preparations for the races. The most maligned of the schooners seems to be the Mayflower, which has probably taken more unwarranted abuse than any vessel afloat. Since the announcement of the project she has been condemned; first, as being too yachty in design; second, as not coming within the "spirit" of the Deed of Gift; third, because she could not carry enough fish; fourth, for her alleged evasion of the spring gales on the Banks; fifth, because she was sailing to the Banks without sufficient cable, implying that she had no idea of getting down to the business of fishing. While the larger part of this criticism has already been refuted, the final answer must await the end of the fishing season, when accounts are reckoned.

The latest rumor that has been going the rounds is one to the effect that the Mayflower will be sold immediately the races are over to Charles H. W. Foster, J. P. Morgan or some other well-to-do yachtsman, who has shown interest in the vessel. To offset this kind of talk the Mayflower directors have found it necessary to file a bond of \$10,000 as a guarantee that the vessel will not be sold for pleasure purposes within a period of at least a year after the races. Notwithstanding the all-sufficient reason that a vessel after seven months of fishing, with its consequent odors of bilge water and fish, would hardly be desirable for a pleasure craft, the directors deem it necessary to file a bond to prevent further calumnies in this direction.

# Preservation of Fish Nets

By HARDEN F. TAYLOR, of the United States Bureau of Fisheries

## PART III.— (Somewhat Abridged)

A RECORD was kept of the shrinkage caused by the various methods of curing nets. The nets were 24½ rows per yard before treatment. After treatment they varied according to the following list. (Of course, the greater number of rows there are the more the shrinkage that has taken place.)

| No.   | Rows per yard |
|---|---------------|
| 1. Cutch only .....                             | 26¼           |
| 2. Glue and cutch.....                          | 25½           |
| 3. Cutch, glue and bichromate.                  | 25½           |
| 4. Cutch and copper sulphate..                  | 25½           |
| 5. Coal tar and cutch.....                      | 28¼           |
| 6. Cutch and coal tar mixed..                   | 27            |
| 7. Cutch, tar and green oil....                 | 25½           |
| 8. Coal tar and green oil.....                  | 25½           |
| 9. Cutch and green oil.....                     | 26¼           |
| 10. Green oil alone .....                       | 25½           |
| 11. Cutch and Stockholm tar...                  | 27            |
| 12. Cutch, Stockholm tar and green oil .....    | 25½           |
| 13. Cutch and linseed oil.....                  | 27            |
| 14. Soap and copper sulphate...                 | 27            |
| 15. Soap, copper sulphate and linseed oil ..... | 27            |

All the methods caused shrinkage, the greatest being caused by coal tar and cutch, but the other combinations of cutch and tar caused marked shrinkage. All the tanning methods cause shrinkage, and the shrinkage increases with each application of the preservative.

To conclude the discussion of tar as a preservative, it can be said that tar effects excellent preservation, is comparatively inexpensive, and requires much less labor and time than, for example, the combination of catechu and linseed oil. For the heavier and coarser kinds of nets that are anchored or moored in the water, such as trammel or pound nets or nets that are handled by machinery, the method is well suited. But for gill nets, the method is not at all suited, and for even the heavier seines that are hauled by hand, consideration should be given to the extra weight added by tar and the consequently increased number of men necessary to handle nets so preserved. In such cases, especially for nets that can be dried occasionally, the more improved barking methods, such as quercitron and potassium bichromate, are likely to prove better and to be little more

expensive or laborious than methods employing tar.

Tar should never be mixed with catechu solution or anything else containing water before application to the net and should never be applied to a wet net. It may be thinned with creosote, "green oil," turpentine, etc., without injury. If a net be cutched or barked before being tarred, it should be thoroughly dried before the tar is applied. While tar may be applied profitably to new, white nets, it seems likely that it will always yield a good return on the investment to tan the nets with quercitron and bichromate and to follow with a thorough drying before application of the tar.

### Creosote, Smoke, Etc.

One of the several liquids distilled off from coal tar is known as "green oil," or creosote oil, which is often used for the treatment of nets. It has been found that creosote oil alone is a good preservative for nets and causes little shrinkage; it also possesses this advantage that it does not make nets stiff. The principal objection to its general use is that it washes out or evaporates rather rapidly from the net, and no method of fixing it is known.

There are many different ways of applying the green oil or creosote to the nets; the net may be well cutched first, then dried, soaked in the green oil when dry, then passed through a wringing machine, and spread out to dry; or the net may be passed straight from hot cutch, without drying, through the green oil, and then dried, or, instead of the oil alone, a mixture of tar and green oil may be used. In whatever way applied it has been found that a net treated with green oil loses but very little strength after two months' exposure in sea water.

A method of smoking nets has been used abroad for many years in houses that had no chimneys, by allowing the smoke to go through passages into a loft where the nets were hung. A direct method of applying the smoke is to fasten the net to the underside of boards which are supported above a smoking wood fire.

While this method appears to be primitive, there is nothing chemically unreasonable about it, and it

may be that under certain circumstances the method would be applicable today. It would certainly be much better than nothing, provided the nets were not allowed to be overheated during the smoking process. It would be necessary to repeat the treatment, perhaps several times a year. The method has the advantage of depositing upon the fibers the volatile antiseptic substances of tar, without the heavy thick parts, and it would appear less likely to shrink the nets.

### Copper Sulphate

A method of using copper sulphate in combination with soap has been used satisfactorily in the French sardine industry.

To treat a net by this process from one-half to three-fourths pound of ordinary soap, such as mottled soap, is used for each gallon of water, and the soap is dissolved by boiling in a copper or in a galvanized bath over a fire. The net is then soaked in the soap solution, taken out, squeezed through the hands, and allowed to drain. The copper sulphate, which is also known as blue vitriol or bluestone, must not be dissolved in an iron vessel, as it will attack and dissolve the iron. It must be put into a wooden or earthenware vessel, and it is not necessary to use heat to dissolve it, as it will dissolve in cold water if stirred up for a short time. The net while still hot from the soap solution is then passed through or put into the solution of bluestone, and the whole net becomes uniformly green. The net is then rinsed in cold water. About three-fourths pound of bluestone to a gallon of water is the proportion required.

This method preserves the net, it has been found, for about four weeks, but after two months under test a sample was found to be quite rotten. The process can, of course, be repeated as often as necessary, and by repeated treatments a net should be kept in condition for years. It causes strong shrinking of the net.

Only the more important and widely used or promising processes for the preservation of nets have been considered. But all the recorded data found that will have a

(Continued on Page 33)

**GLOUCESTER'S STAND FOR BETTER FISH****Curers Issue New Regulations—No Eastern Fresh Fish to Be Handled During Summer**

**A** SIGNIFICANT sign of the times in the fish industry is the recent move of the Gloucester fish curers in joining hands to improve the quality of their product.

New regulations relating to the handling of shack have been drawn up, and a circular embodying the decisions of the curers has been sent to the masters and crews of the local shacking fleets.

Although the circular is in the nature of an appeal for the co-operation of masters and fishermen to raise the standard of quality, it carries specific regulations governing the handling of "splitting fish". Beginning May 1 the curers will not buy the fare of any vessel that sails from Boston or Gloucester on an eastern fresh shacking trip. This means that shackers going to eastward must carry a supply of salt. Western fish that is brought in fresh must be of good market quality to bring full splitting prices. Regulations pertaining to the proper salting of the fish are also included, to the end that only fish of a "white color" will be produced.

The circular is signed by the following Gloucester concerns: Gorton-Pew Fisheries Company, Davis Bros. Fisheries, Inc., P. J. O'Brien & Company, Parkhurst Fisheries Company, Gloucester Salt Fish Company, Frank C. Pearee Company,

Frank F. Smith & Company, Wm. H. Jordan Company, Booth Fisheries Company, Henry E. Pinkham Company and Charles F. Mattlage & Sons Company. These firms comprise practically all of the larger fish curers of Gloucester.

Much credit for the advancement of the project is due the state inspector of fish, Arthur L. Millett, who is using his office, as well as his wide acquaintance among the fish trades, to excellent advantage in furthering reforms looking toward better fish.

**FISHERIES SCHOOL MAY OPEN IN FALL**

Professor S. C. Prescott, acting head of the Department of Biology and Public Health of the Massachusetts Institute of Technology, expects that instruction in fisheries will begin in the fall. The course will be known as an option in the biology course and will be conducted along lines especially beneficial to the fish and packing industries. As now planned the course will include a certain amount of engineering, and the study of those classes of aquatic life with which the industry is concerned, such as fish, clams and lobsters, and the study of food products prepared from these creatures.

The Massachusetts State Division of Fish and Game and the United States Bureau of Fisheries have urged the Institute to undertake the course. The Bureau of Fisheries has placed its laboratories at the disposal of the Institute and detailed specialists to assist in the instruction.

**Does Your Boat Leak?**

Any old boat, as long as the frames are in fair condition, can be made water-tight with

# Jeffery's

**WATERPROOF  
MARINE GLUE**

This applies to any craft that floats, of wood or steel, from a dory to a schooner. Put your leak problems up to us. We will stop them.



**Send for Booklets** "How to Make Your Boat Leak Proof" and "Marine Glue—What to Use and How to Use It." It is important to use the kind we recommend.

For sale by all Ship Chandlers, Fisherman's Supply Houses, Paint and Oil, and Marine Hardware Stores

**L. W. FERDINAND & COMPANY, 152 Kneeland St., Boston, U.S.A.**



# The Fisherman's Motor---Choice of Type

By H. L. Sparrow, Vice-President Gray-Aldrich Company

This is the third of a series of articles relating to marine motors written directly for the instruction of fishermen by one of the foremost authorities in the East. Our readers are invited to write for information regarding any phase of power boat mechanics.—Ed.

IT is doubtful if there is any other type of power-driven boat today for which the engine requirements are as many and as varied as those of the fishing boat whether the boat be large or small, auxiliary or straight power driven.

The first consideration is the necessary amount of horse power required to give the desired speed without overworking the engine and, if possible, to allow the engine to be operated with partly closed throttle. Even a small amount of power in reserve is a mighty fine asset for the engine, and many times for the boat as well, as there are bound to be times when this reserve will come in handy to overcome unusual or adverse conditions. The engine selected with this in mind will last far longer than one that has just enough power to accomplish its task.

In selecting an engine consider its suitability from the standpoint of design and whether it is of the proper type for the work to be done. There have been many engines condemned from no fault of design or construction, but simply because they were not suited for the particular work they were put to.

Space required, propeller size and engine speed must all be given due consideration. In the matter of space it is of course necessary to determine whether or not the engine can be installed in the space available. Care should be taken to use up as little of the valuable space below deck as possible, although it is sometime well to disregard to a certain extent the space required and make sacrifices in order to install the engine that meets other requirements.

The propeller must have sufficient area to propel the vessel without undue slip, and the pitch must be in proportion to the speed required. The pitch should also be such as to allow the engine to turn up to the rated revolutions. The engine speed is variable depending on the actual dead weight of the vessel. For the heaviest type of auxiliary vessel the heavy duty, slow turning engine is the only type that should be considered. An engine with long stroke is particularly well suited to

this type of vessel, and will be found to have a longer life and to respond more readily to overloads, as when heading into a stiff gale or running in a sea way where the load is constantly changing.

Where the boat or vessel is designed for use with power almost entirely, it is possible to use higher engine revolutions. This is particularly so when the boat is of moderate weight, as the higher revolutions usually go with a more moderate weight engine.

Another consideration in selecting an engine is piston displacement which is determined by the bore and stroke and by the engine revolutions. The diameter of the cylinder bore squared, multiplied by .7854 and this sum multiplied by the length of stroke gives the displacement of one piston for one revolution. To obtain the total displacement this figure must be multiplied by the number of cylinders. This sum must again be multiplied by the number of impulses, or explosions, in order to obtain the total effective displacement per minute. Bear in mind that for a two-cycle engine the number of impulses equals the R. P. M., but for a four-cycle type of engine the impulses are only one-half the number of R. P. M.

Next to bore and stroke the most important feature in selecting an engine is the bearing dimensions, for in order to insure long life to the engine, it must have ample bearing surface. First of all the crankshaft must be of ample diameter, for this of course determines the size of the main bearings and there should be one bearing between each crank. Not only should these bearings be of generous diameter, but they should be designed to have ample length in order to reduce the wear to a minimum, and the crank pin bearings should also have both ample diameter and length to prevent overheating as well as excessive wear. While the main bearings require but little attention, the crank pin bearings should be easily accessible for taking up wear and removing for inspection if necessary.

One thing that is often lost sight

of by the purchaser is the importance of selecting an engine with small structural units; that is, an engine which can be taken apart into small component parts that are easily handled when making repairs or cheaply replaced if necessary. On a well-designed engine there is always provision made for taking up lost motion and wear wherever possible, and if it is not practical to take up wear a bushing is provided easily removed and replaced at a minimum cost, usually making the part to all practical purposes as good as new.

It is of course necessary that all parts of the engine be readily accessible, and yet as far as possible protected from dirt and salt water. The crank case should be absolutely oil tight to prevent the escape of oil and to keep all dust, dirt or water from getting in and mixing with the lubricating oil.

Without ample circulating water it is not possible to operate an engine for any length of time at full power without encountering serious difficulty, so it behooves the prospective purchaser of an engine to study well both the water space on the cylinders and heads, and also the design and capacity of the water pump. The water jackets should have uniform spaces for the circulating water with no pockets for steam to form to hold back the circulating water. The pump should be of more than sufficient capacity to supply all the cooling water necessary at full load, for when the packing is loose or the plunger or the check valves worn so that part of the water escapes at each stroke, then the extra capacity will make up for the losses and still supply the required amount of water.

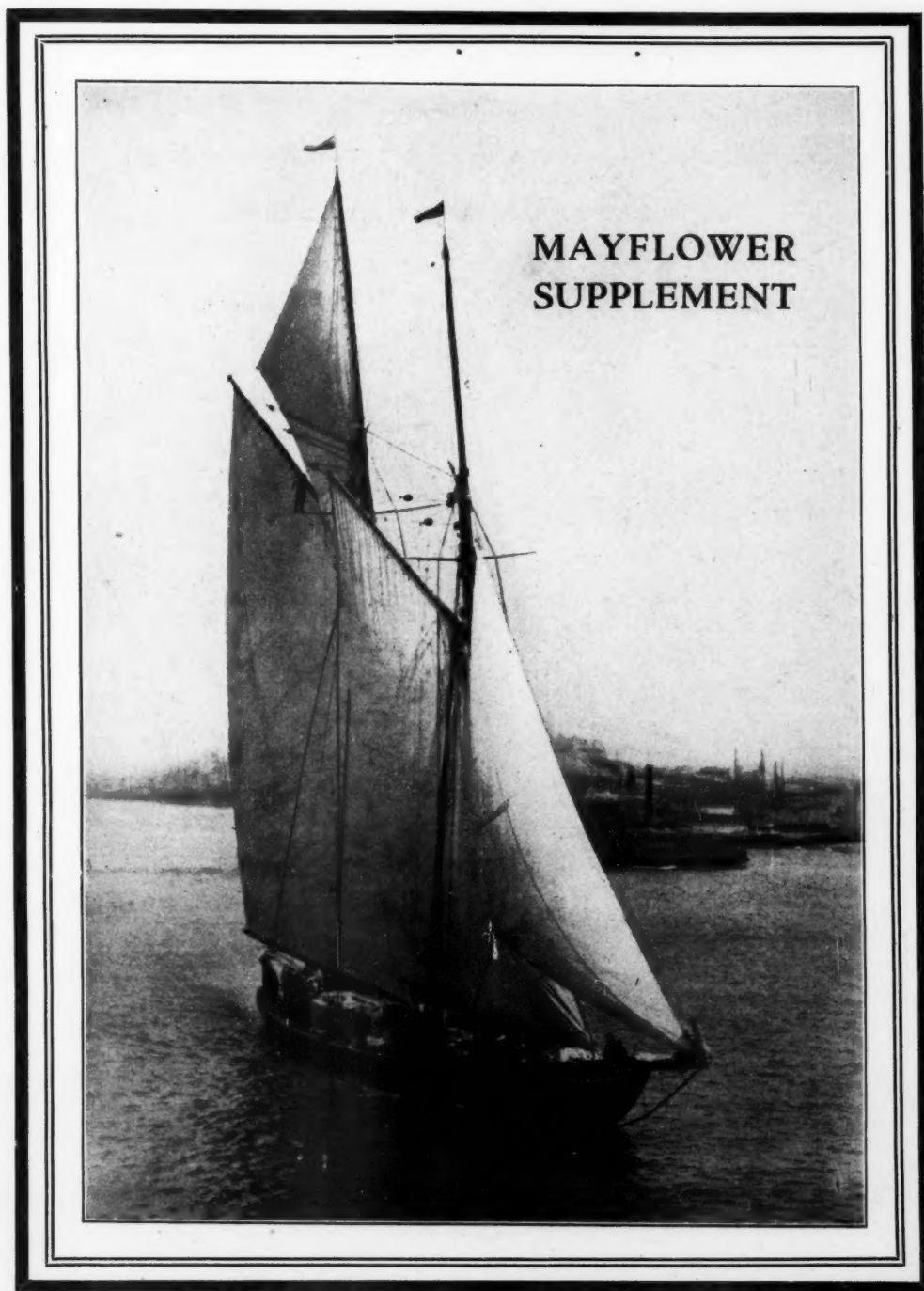
It is hard to say which is the more important, the water circulating system or the oiling system. Without either the engine cannot function for any extended time. Therefore it is well for the purchaser to investigate the method of lubricating the engine, for on the oiling system depends the satisfactory operation of the engine and the freedom from expensive repairs, to say nothing of the wear and depreciation of the engine.

(Continued on Page 33)



# ATLANTIC FISHERMAN

BOSTON, MASSACHUSETTS .: MAY, 1921



J. F. JAMES & SON .: .: .: .:

Shipbuilders

EVERETT B. JAMES, Master Builder of Mayflower .: .: .:

SHIPYARDS - ESSEX, MASSACHUSETTS



## PIGEON HOLLOW SPAR CO.

ESTABLISHED 1830

131 Coleridge St. - - - - - East Boston, Mass.

BUILDER OF SCHOONER MAYFLOWER SPARS



Schooner Mayflower Putting Out of Gloucester

Both Cup Defender and Challenger, Resolute and Shamrock IV, were equipped with Pigeon Hollow Spars

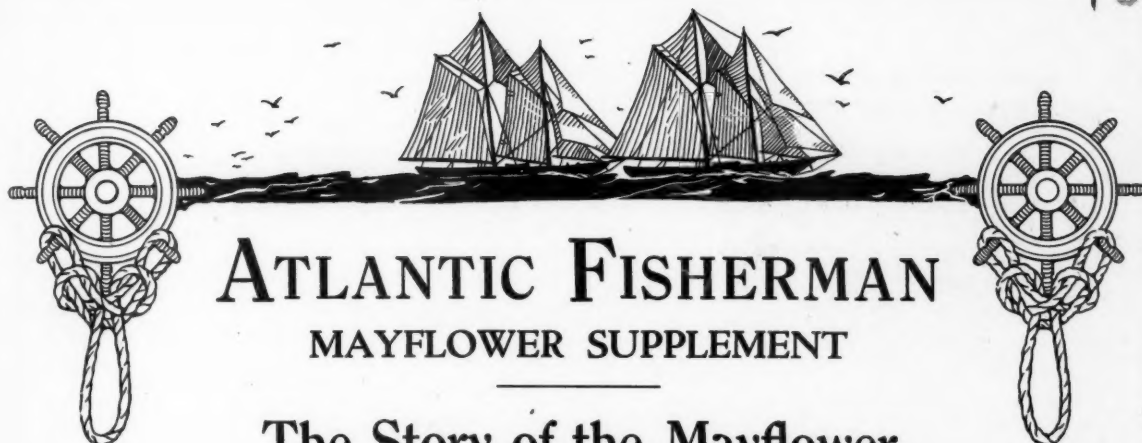
Oldest Spar Yard in the  
Country

—  
FLAG POLES



Pigeon Hollow Spars are  
used Everywhere

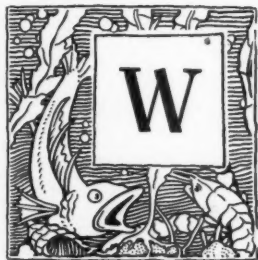
—  
DERRICKS



# ATLANTIC FISHERMAN

## MAYFLOWER SUPPLEMENT

### The Story of the Mayflower



WITHIN ten minutes, so the story goes, after the Gloucester fisherman Esperanto had crossed the finish line a winner in the final contest of the Fishermen's Cup Race last fall, Nova Scotia had raised \$60,000 for the purpose of building a vessel capable of licking any Yankee so-

called flier that came up the coast.

Nor did they waste any time about getting the project under way. W. J. Roue, who had demonstrated his ability many times to develop speedy craft, was given the job of designing the proposed vessel. And the Smith & Rhuland yards were handed the contract to build her.

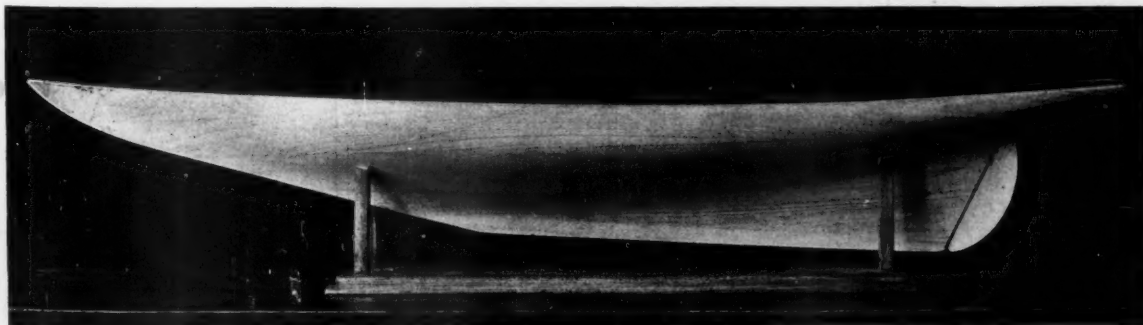
With such a formidable combination teamed up for the express purpose of taking the Halifax Cup away from Gloucester, things began to take on a rather dismal aspect from an American point of view. Then, too, Captain Conrad, king of the LaHave fishermen, catching the racing fever, proceeded to get busy with Amos Pentz in the designing and building of the best schooner that Shelburne could produce.

Meanwhile, Gloucester seemed content to trust the safety of her laurels to those vessels that al-

ready bore her name as a hailing port. Perhaps she did not grasp the full significance of the Canadian preparations. At any rate, time was flying, and it looked very much as though the Canadians had "got the jump" on America.

About this time Fred Pigeon, together with his brother, Roy, sensed the situation and realized that something had got to be done—and done at once—in the defence of that cup. There may be a few people around Massachusetts Bay interested in boats whom Fred Pigeon doesn't know. However, there seemed to be a sufficient number that he could count on to put over his plan. It was a pretty big project, and the matter of time was a consideration that loomed large and ominous. April 1, according to the race regulations, was the last day that a vessel might sail for the Banks and be eligible. But April 1 was out of the question, so far as the construction of a new vessel was concerned. The committee at Halifax was appealed to, and it very courteously came through with a special dispensation, granting Mr. Pigeon and his associates an additional thirty days. Even with this extra month many doubted the possibility of putting over the project in the short time remaining.

The plan, by the way, was to put together the best fisherman America could produce. The logical man to design such a vessel seemed to be W.



EXPERTS SAY THAT FUTURE FISHERMEN WILL FOLLOW LINES OF MAYFLOWER



## Shipmate Ranges

Smallest size  
Body 18 $\frac{3}{4}$  inches long

Largest size  
No limit to length

### Overheard Aboard a Homeward Bound Bank-Fisherman

SKIPPER (*anxiously*)—"How's everything forward after that dive she just took?"

FISHERMAN (*nonchalantly*)—"All right, Skip. She washed the crowd out o' the lee bunks an' flooded the fo'c'sle. Swept all th' cook's pots off'n his stove —"

SKIPPER (*greatly concerned*)—"Did it put his fires out?"

FISHERMAN—"Oh, no! The SHIPMATE'S built for this submarinin' —"

SKIPPER (*with a sigh of relief*)—"Thank Heaven! Dinner'll be ready in time!"

MADE BY

**The Stamford Foundry Co.**  
Stamford, Conn.

Established 1830

We also make Shipmate HEATING STOVES  
to keep the cabin snug and dry.

Starling Burgess, son of the late Edward Burgess, famous naval architect, who furnished lines for the fisherman Fredonia, which proved an epoch marker because of her speed and ability in rough water, and of which the Esperanto is a prototype. Mr. Burgess was given free rein so long as utility were not sacrificed to speed.

The choice of builder for such a craft naturally fell to J. F. James & Sons, whose vessels have made Essex famous. But Everett James, master builder and shrewd Yankee, was a little bit reluctant about undertaking to build a vessel in the time required, which was shorter by two months than the usual contract time. Suffice it to say, that Fred Pigeon again won his point, leaving Mr. James with a nice problem on his hands.

### Construction Begun February 4

Actual work on the construction of the Mayflower—a name, by the way, particularly happy because she is part and parcel of a locality inseparable with the Pilgrims—was begun February 4, although the mold loft had been busy for several days and the process of laying down was well started. April 12, just 67 days later, she was launched, amid the most festive and gala surround-



EVERETT B. JAMES,  
Master Builder of Mayflower.

ings that have attended any similar event in the picturesque little village Essex. Sixty-seven days is indeed a record, though despite the rush the vessel received the same thorough and precise workmanship that characterizes all Essex-built vessels. Having been favored with good weather, it is said that she could have been launched fully a week earlier had it been necessary.

Continued on Page 19)





**SCHOONER ARETHUSA**

*Owned by Capt. Wm. McCoy, West Palm Beach, Florida*

**REFITTED FOR SOUTHERN CRUISE AT**

**UNITED SAIL LOFT**

Sail Makers for Schooner  
**MAYFLOWER**

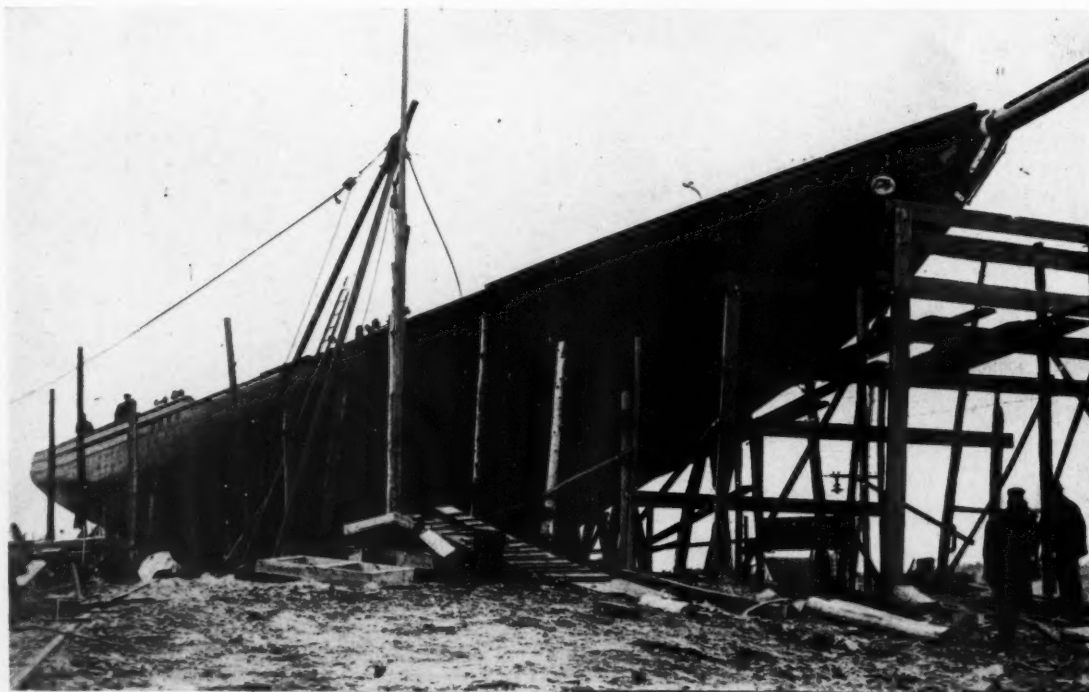
**Gloucester, Massachusetts**

# OCEANIC COTTON DUCK

The Sails of the MAYFLOWER are made of  
**Oceanic Duck**

WELLINGTON, SEARS & COMPANY

Boston New York Philadelphia Chicago St. Louis New Orleans San Francisco Atlanta



Courtesy of Albert Cook Church.

MAYFLOWER TWO DAYS BEFORE LAUNCHING, SHOWING CLEAN LINES OF UNDERBODY

## The Story of the Mayflower

(Continued from Page 16)

Probably no vessel ever created so much interest, or aroused the attention of the general public to such a degree, as this new Burgess craft. Boat lovers from everywhere came to inspect her. It is safe to say that fully 100,000 people have gone out of their way to see and admire the probable defender of the Fishermen's Trophy. The press of America, and Canada as well, have carried reams of copy covering every phase of her development. It seems fair, at this point, to put in a word of commendation for George Hudson, expert on marine matters, whose fair and intelligent treatment and criticisms of the Mayflower, published in the Boston Herald, have contributed a great deal to the success of the enterprise in the way of wholesome publicity.

The morning of April 14, at half past nine, the hull of the Mayflower was handed over at T wharf, Boston, to M. J. Connolly, rigger. At 1.10 P. M. both her big sticks were stepped. Seven days later, in the face of adverse weather, she was handed back to Captain Larkin sparred, rigged



MAYFLOWER AFTER LAUNCHING SHOWING  
BURDENSOME HULL.

and with her sails bent on. Incidentally, another record. And it was a good, thorough job, too—as good a job as Mr. Connolly has ever turned out in his 27 years of vessel rigging. At least, that was the verdict of the critical old fellows down at T wharf, who have inspected plenty of such jobs in their day.

### Lives Up to Promise

The following Sunday came the initial try-out and gear-stretching jaunt, a run that took the Mayflower nearly to the lightship and home by the way of the Graves and Broad Sound. That she lived up to her promise, is putting it mildly. Of course, she could not show at her best, what with the wet weather and kinky cordage; but it was evident to the fishing masters and other experts

The  
Highest  
Grade  
Spar Varnish  
In the World

Will  
Never  
Softens,  
Chip, Peel  
or Turn White

**The Mayflower is Varnished**

with the highest grade exterior varnish on the market. Tough as rawhide, clear as crystal—no test of water, wind or weather is too severe for

**WATERPROOF  
SPAR VARNISH**

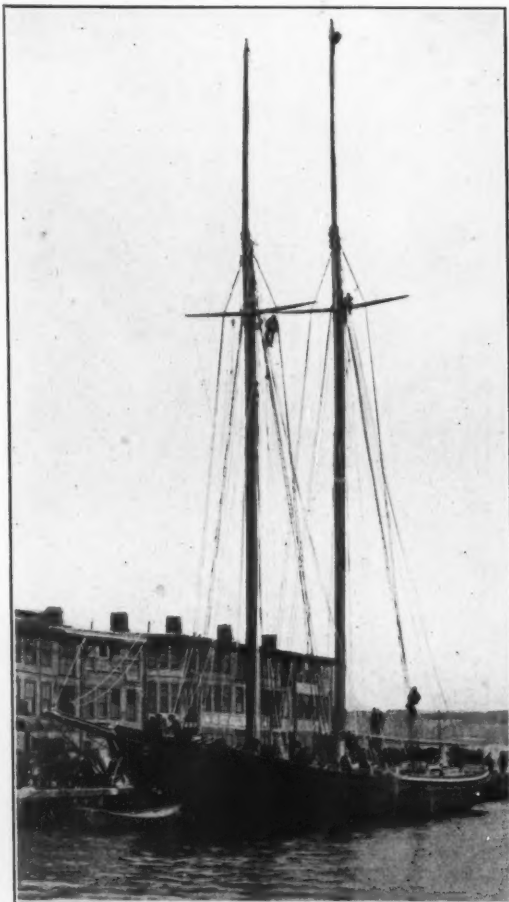
The spar varnish that is built for the purpose and **WILL NOT TURN WHITE**. Will not crack; will not chip or soften in either salt or fresh water. Heat or cold will not affect it—cannot peel or blister. Send for sample board finished with Kyanize Spar Varnish and test it yourself. You will want to use it.

MANUFACTURED IN NEW ENGLAND  
**BOSTON VARNISH COMPANY**  
Everett Station, Boston 49, Mass.



## Schooner Mayflower

BEING RIGGÉD AT T WHARF



**M. J. CONNELLY**  
RIGGER and CONTRACTOR

Wire Splicing, Derrick Guys  
Flag Poles

22 Commercial Wharf, North, BOSTON, MASS.

ESTABLISHED SINCE 1892

aboard of her that she was far-and-away a better fisherman than any of the "fore-'n'-afters" they'd met up with. Naturally enough the good old Esperanto came in for consideration for comparative purposes. According to the skippers, ancient in seafaring experience, the Mayflower is a lot faster. Captain Reynolds, who once carried the sticks out of the Esperanto, ought to know. He thinks, too, the Mayflower should prove an excellent fisherman. Of course Captain Larkin was mighty pleased, for he's got a tidy sum of money tied up in this vessel, and her ability as a fisherman—one that can be depended on to make quick trips on an economical upkeep—is strictly a business proposition with him. Altogether, there seemed nothing to find fault with but the weather.

More puttering around with the endless tasks incident to the final fitting out of a vessel, provisions and fishing gear put aboard, and just two days before April 30—the time limit that a vessel could sail and comply with the race regulations—she swung out into the stream amid cheers and whistle blasts, and squared away for Northern waters to get down to her real business of fishing.

### Shows Heels to Dunton

Off Gloucester she fell in with the L. A. Dunton, Captain Felix Hogan, a new Essex-built craft, she, too, bound on her maiden trip, a-halibuting. It was plain that Captain Hogan, with everything set and drawing, and flags at his peak, was just itching for a race, it being his first chance to measure speed with anything that was not handicapped with auxiliary engines, heavy cargoes or some other retarding agent. Cap'n Larkin, an accommodating soul, was quite willing to oblige his friend Hogan—Hogan and he being close neighbors when ashore.

Both vessels set a course for Seal Island, distant some 200 miles, and squared away for their run to Shelburne—the Mayflower to pick up two of her crew—bucking heavy head winds, storm laden. It was not long, however, before the Mayflower was showing her name to Captain Felix and his crew. A little later the Dunton dissolved from view altogether, leaving the Mayflower to nose her way alone through thick, wind-driven mists and lumpy seas.

It was seven hours after the Mayflower was made snug at her anchorage in Shelburne harbor before the Dunton rounded up alongside. The following morning the two vessels left in company for Canso to take on ice, the Boston flier again beating her rival, this time by nine hours. From Canso the Mayflower made for Amherst Island of the Magdalens for bait, and then proceeded to the Grand Banks to get down to her business of salt fishing.

Let those who question the ability of the Mayflower in rough seas bear in mind that the stormy weather she encountered on her trip down to the Magdalens was as severe as any she is likely to meet anywhere. At any rate, Captain Larkin

THE  
MAYFLOWER  
HAS  
**GLIDDEN**  
EVERY WHERE ON EVERYTHING

HULL — Glidden Marine Battleship Gray  
Marine Black  
Red Copper Bottom Paint  
ALSO  
Glidden Marine Gloss White and Spar  
Varnish



Manufactured and Sold by  
**THE GLIDDEN COMPANY**  
OF MASSACHUSETTS

83-85 HIGH STREET,

BOSTON, MASS.

## SPECIAL LUMBER

FOR

### Schooner MAYFLOWER

Furnished by

**Chase & Janvrin Co.**

of

**Hampton Falls - New Hampshire**

thinks well enough of her as a sea boat to take her out on her very first trip to the stormiest of all fishing grounds, the Grand Banks of Newfoundland.

"Stiff and dry"—the laconic text of a telegram received from Captain Larkin—may be taken as a fitting tribute to, as well as a final endorsement of, a vessel that seems destined to revolutionize the American hooker.

So much for the development of the Mayflower project. It will be seen that the promoters of it had many serious difficulties to overcome—difficulties that often demanded radical expedients in their fight against time.

However, the problems attending the building of the vessel were in no way so annoying as the persistent, often invidious, criticism directed against the Mayflower from her very inception. The attacks have been so persistent and so misleading as to lead one to believe that they are "inspired" at a source that is evidently unalterably opposed to the Mayflower as a contestant in the Fishermen's Races.

In the face of such criticism it is pleasant to hear the opinions of men like Arthur D. Story of the famous Essex shipyard bearing that name, who prophesies that the Mayflower will be the accepted model for future vessels of the fishing schooner type. What finer tribute than that of Captain Charles Harty of Esperanto fame, who declares her "the finest fisherman ever built"!

ESTABLISHED 1866

INCORPORATED 1890

## The Thomas Laughlin Co.

PORTLAND, MAINE

Manufacturers of the most complete line of

### Marine Hardware

in the world

We furnished the anchors for the

**Schooner "Mayflower"**

and manufacture more boat and fishing anchors than all others in this country combined



## SPECIFICATIONS OF CONTENDERS

THE following table of comparative dimensions of the Bluenose, Canada and Mayflower will show that there is little material difference between the Bluenose and Mayflower. The absence of the waterline length of the Shelburne vessel, Canada, would seem to substantiate the rumor prevalent along the coast that she is over the maximum length of 112 feet.

|                      | Bluenose | Canada  | Mayflower  |
|----------------------|----------|---------|------------|
| Length Overall ..... | 141'     | 138' 6" | 143' 7"    |
| Beam .....           | 27'      | 25' 2"  | 25' 8 1/2" |
| Waterline .....      | 110'     | .....   | 112'       |
| Depth in Main Hatch  | 11' 6"   | 12'     | 11' 9"     |
| Draught .....        | 14' 6"   | 16'     | 15' 10"    |

## SPARS

|                         |        |        |        |
|-------------------------|--------|--------|--------|
| Mainmast above Deck     | 81'    | 81'    | 88'    |
| Foremast above Deck     | 73'    | 71' 6" | 83'    |
| Main Topmast Overall    | 53' 6" | 52'    | 52' 6" |
| Foretopmast Overall ... | 48' 6" | 48'    | 42' 9" |
| Main Boom .....         | 81'    | 84'    | 71'    |
| Main Gaff .....         | 46'    | 50'    | 44' 6" |
| Fore Boom .....         | 32' 6" | 33' 8" | 34' 6" |
| Fore Gaff .....         | 32' 6" | 32' 8" | 34' 6" |

## SAILS

|                        |        |        |        |
|------------------------|--------|--------|--------|
| Total Area .....       | 10,937 | 10,300 | 10,783 |
| Mainsail .....         | 4,100  | 4,075  | 4,270  |
| Main Gaff Topsail .... | 756    | 875    | 672    |
| Foresail .....         | 1,640  | 1,500  | 1,832  |
| Fore Gaff Topsail .... | 560    | 450    | 500    |
| Staysail .....         | 1,350  | 1,350  | 1,272  |
| Jumbo .....            | 775    | 500    | 715    |
| Jib .....              | 835    | 850    | 870    |
| Jib Topsail .....      | 966    | 700    | 652    |

## TACKLE BLOCKS

## DÉAD EYES

## HOOPS

Manufactured by

### Gloucester Block Co.

George E. Tarr, Mgr.

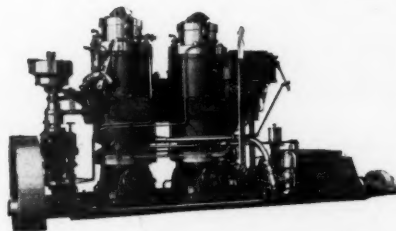
Gloucester, - - Mass.

## GRAY-ALDRICH CO., Inc.

### WOLVERINE — *Kahlenberg* — LATHROP

## MARINE ENGINES

**STRONG**  
**DURABLE**



**SUBSTANTIAL**  
**ECONOMICAL**

Patent Windlass Hoists

Winch and Seine Purser Hoists

Prices Reasonable

Machine Shop

Good Service

LET US FIGURE ON YOUR REQUIREMENTS

84 Atlantic Avenue, Boston, Mass.

## BEN FRAZER IRON WORKS

furnished

## Iron Fittings

for

RIGGING and HULL

of

Schooner Mayflower

Wharf Street

GLOUCESTER, MASS.

EVERETT FRAZER, Manager

## Special Lumber

BY

JOHN G. HALL & CO.

114 State Street

Boston

Hackmetack  
SHIP KNEES

### A QUALITY FISHERMAN

**I**F the Mayflower seems to be too radical a departure from the "regulation" fisherman, bear in mind that one great secret of American success is the readiness to scrap old machines, old processes and old designs for an improvement that will do the work better in less time with happier results.

The Mayflower has already demonstrated her ability to do her work in less time—a point of marked significance to the fishing industry. Upon this feature alone authorities are already predicting that her model will be closely followed in the building of future fishermen.

Thus does the Mayflower stand out as the superior of any fisherman launched in American waters. Not in design alone, but as the embodiment of the finest material put together with the skilfullest workmanship, does she stand supreme.

The outstanding feature in connection with the materials used in the Mayflower was the quality of her lumber. Some of her 3-inch top-side planking measured as long as 80 feet—all clear white oak. Underbody planking was 3-inch hard pine—splendid stuff. Frame is New England oak, 7-inch on bottom and 6-inch on top. Some of the oak in her keel was so solid that it would not float. All special lumber was supplied by Chase & Janvrin Company of Hampton Falls, N. H., with the exception of ship knees, which were furnished through John G. Hall & Company of Boston.

Steel and iron stock came from the Arthur C. Harvey Company, Boston, and was wrought and fitted into the ship by the Ben Fraser Iron Works of Gloucester and Edward Preble of East Boston.

Selection of wire rigging fell to the Roebling brand, supplied through the Durable Wire Rope Company, Boston. The lower rigging was 7/8-inch plow steel rope with breaking strength of 32 tons.

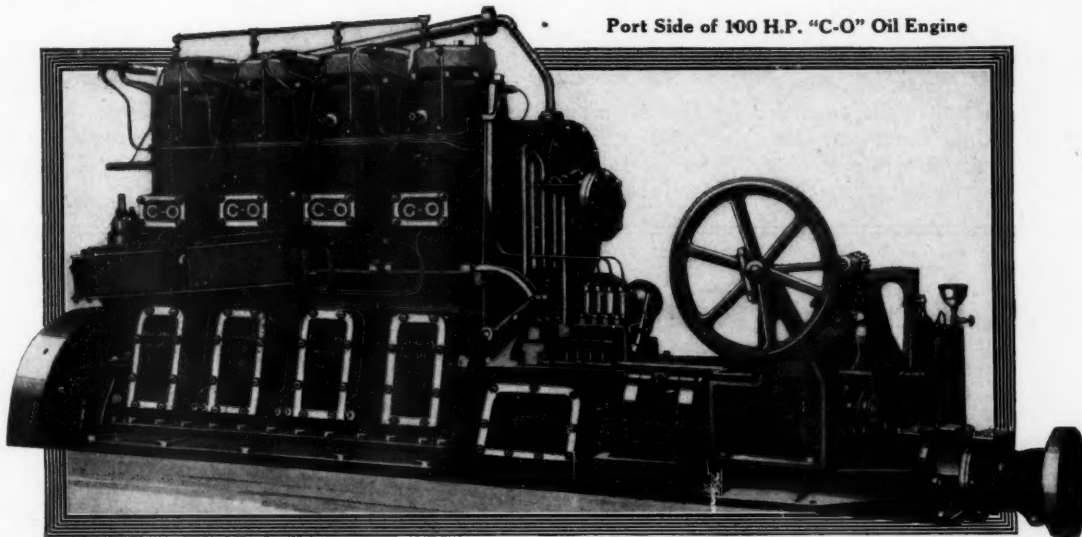
All special ropes, such as bolt ropes, point ropes, tarred lanyards, buoy lines, dory burdens and painters—also all hemp fittings, including spun yarn, marline, ratline, hambroline—were made especially for the Mayflower by the Plymouth Cordage Company. This material was furnished through the Lincoln-Dillaway Company, Boston, who also supplied 38 barrels of Davey's Best Unspun Oakum, which was made from new American hemp. Colors, flags and burgees (the latter product receiving especial commendation), together with mast head-light and side-light—Davis make—and shackles and turnbuckles were also furnished by the Lincoln-Dillaway Company.

In the selection of paints and varnishes the products of the Glidden Company and the Boston Varnish Company were chosen.

Her spars are solid, contradicting the popular impression of their being hollow. They were made at the Pigeon spar yard of East Boston.

All rigging was fitted in the shops of M. J. Connolly, Boston, who has rigged fishermen for 27 years. The standing rigging was served all over.

# Fairbanks-Morse "C-O" Marine Oil Engines



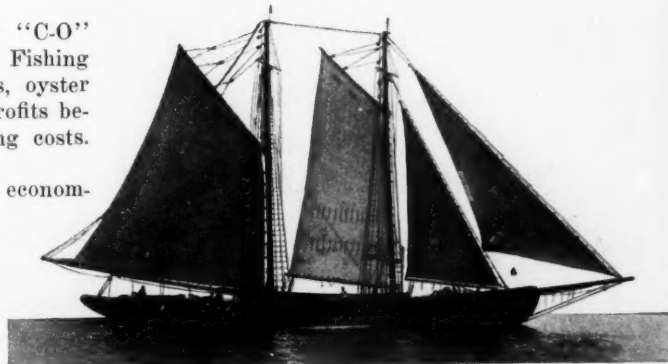
Port Side of 100 H.P. "C-O" Oil Engine

## Five Hundred "C-O" Powered Fishing Craft on New England and New Brunswick Coasts

One large fishing company uses fifty "C-O" engines and only one of another make. Fishing craft of all descriptions—smacks, trawlers, oyster dredges, etc.—in all waters make steady profits because of their reliability and low operating costs.

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Foot ropes are of phosphor bronze. The Connolly concern also sparred and bent on the sails.

The sails were made at the United Sail Loft, Gloucester, and are said to be as fine a suit of sails as ever went on a fisherman. Oceanic duck, of course, was the material used, which was furnished by Wellington, Sears Company, Boston.

Sixty fathoms of plow steel 1 1/8-inch chain came from the Clinton E. Hobbs Company, Boston. The anchors were the product of Thomas Laughlin Company, Portland, Me.

Cordage was made to order by the American Manufacturing Company, Brooklyn, N. Y., the amount required being close to 200,000 feet. The tackle blocks, numbering about 90, were also es-

pecially made, coming from the Gloucester Block Company, Gloucester. Her deck hoist is the regulation fisherman equipment of 5 H. P. double back-gear type with large plunger pump, supplied by the Gray-Aldrich Company, Boston. Beds were laid for two 60 H. P. "C-O" engines, manufactured by the Fairbanks-Morse Company.

She carries a "Shipmate" range, of course, made by the Stamford Foundry Company, Stamford, Conn., and her smoke pipes and galvanizing work by the East Boston Galvanizing Company.

Mattresses, bedding and linoleum were furnished by the Jackson Caldwell Company of East Boston. Perry, Buxton & Doane, Boston, supplied her scrap iron ballast.

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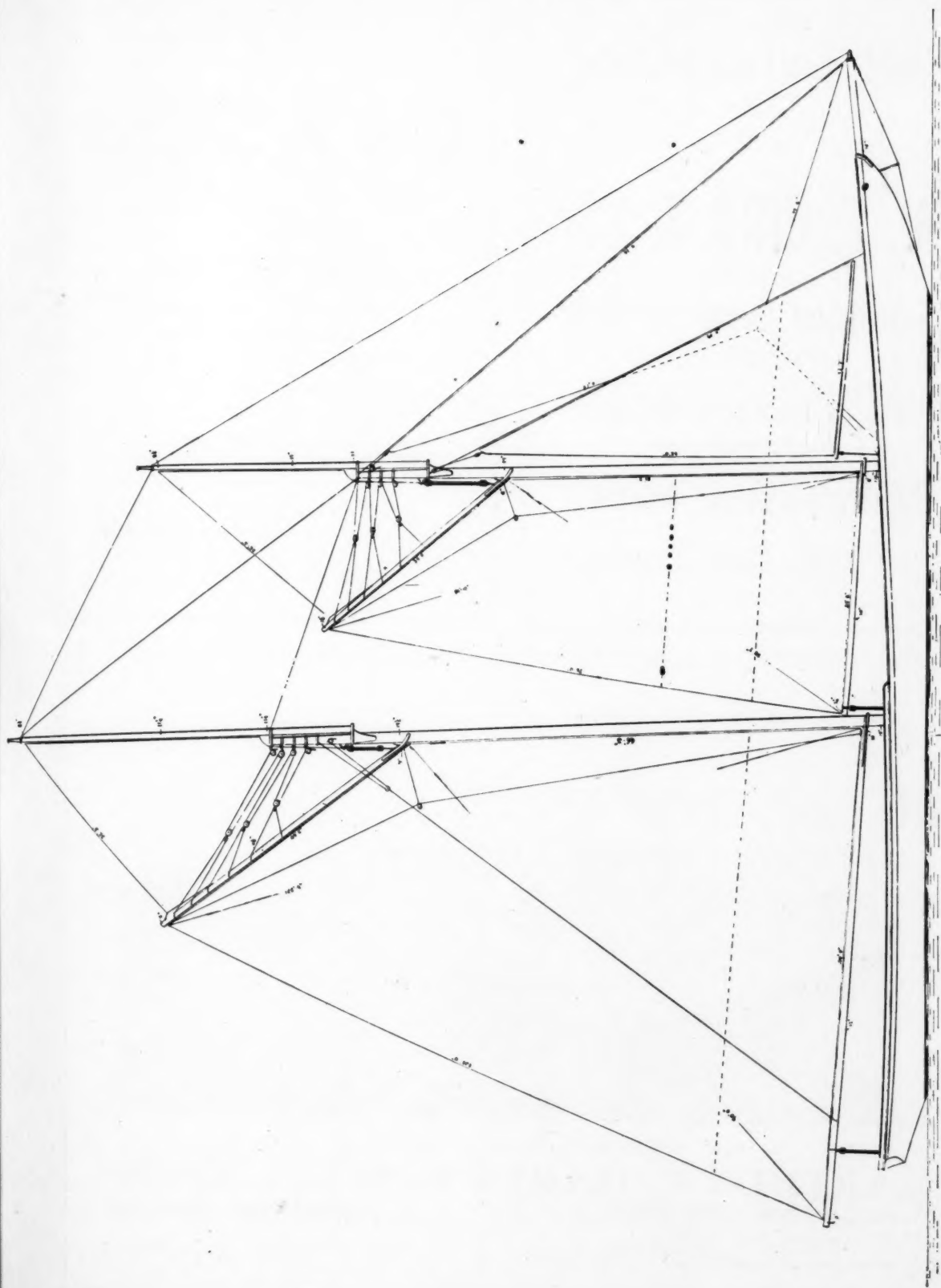
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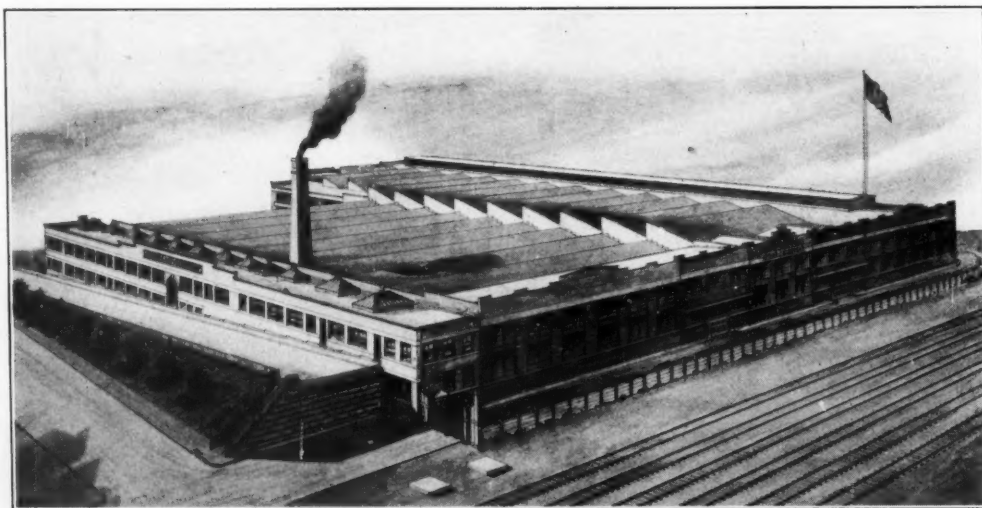
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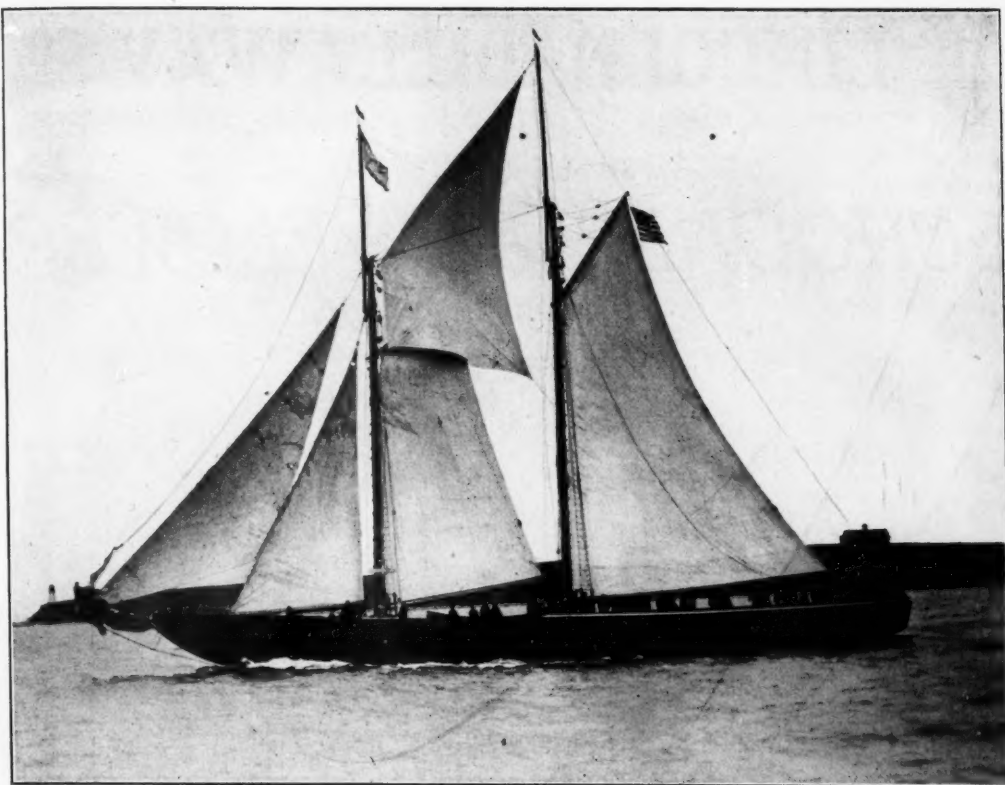
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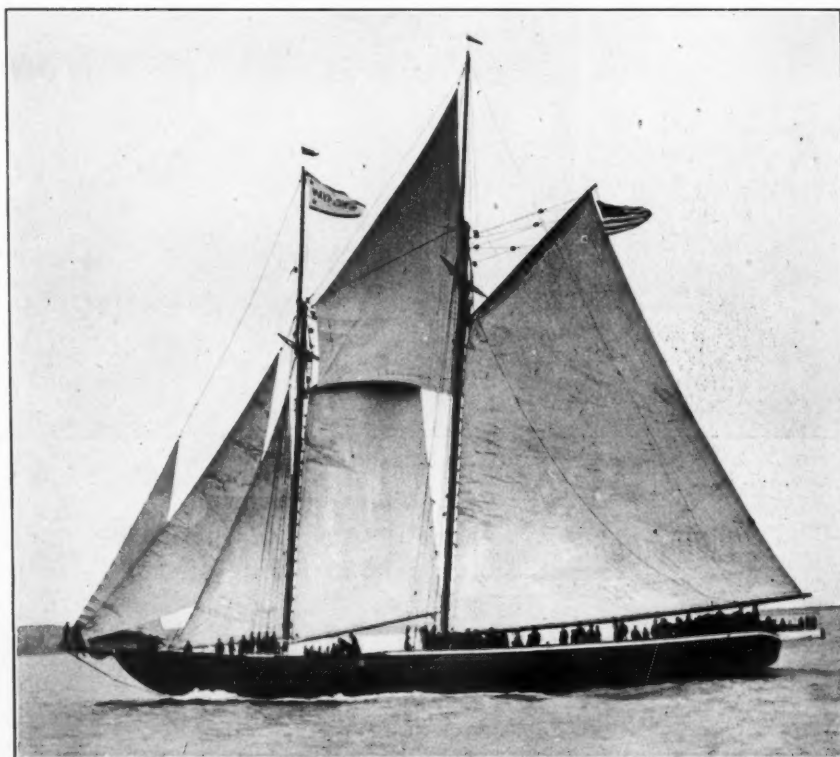
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## Preservation of Nets

(Continued from Page 9)

material value have been included in this paper.

It should be obvious to most people that nets should always receive some preservative treatment. Coarse nets, pound nets, and the like should be both barked with catechu or quercitron, mordanted with potassium bichromate, and then tarred. Where it is not possible or suitable to tar the nets, they should receive the catechu or quercitron treatment and the mordant. It is preferable to use two baths of quercitron, the first containing only one-half the total amount to be used.

Though no actual figures have been brought to prove it, there is little doubt that nets are destroyed more rapidly in warm climates and warm weather than in cold. Fishermen should take note of this fact and be accordingly more careful of their nets where the weather is warm. It is also likely that foul, dirty water works more rapid destruction on nets than clean water.

When nets are piled up wet—especially if they are foul with slime, blood, fat, etc.—the rapid oxidation heats the net. Even if the net does not take fire the heat generated may very well cause a great weakening. This weakening will not be visible, but will tell in a much shorter life of the net. However carefully the net is barked or tarred, a very short life can be looked for if the net has been heated.

For a temporary preservative, where it is not possible to dry the nets, it is customary to salt them.

This principle is made use of in many ways. Every fisherman knows that salt draws the water out of fish in the curing process. It is not so apparent, but it is equally true, that it draws the water from and kills the bacteria that would otherwise cause the fish to decay, and thus preserves it. Any equally concentrated substance would do the same. Thus sugar is used in very concentrated sirup to preserve fruits.

In this way salt preserves nets. It dissolves in the moisture on the threads to make a very strong solution; this strong solution kills bacteria and other small organisms by extracting the water from them. From this it is hardly necessary to say that the salt should be applied generously, and preferably in the dry condition, to a wet net. If brine is used, it should be very strong.

But salt will not prevent heating in an oily net that has just caught very fat fish, such as herring. The heating is caused by the air working on the fat. The only way to prevent this heating is either to get rid of the fat or to prevent the air from getting to it.

To prevent this heating of recently used herring nets aboard a vessel, a wooden tank should be provided with a tight fitting lid, filled with water or salt solution, and the net put into this and covered over with the lid until there is opportunity to wash it. The water or salt solution keeps out the air and prevents heating. The cheapest obtainable grade of salt may be used. Nets, as every fisherman knows, should be washed and dried at every opportunity.

## The Fisherman's Motor

(Continued from Page 11)

While it is doubtful if the question of depreciation ever enters into the buyer's head it is a fact that there is a world of difference in this point alone between various engines. Some engines have a good fair market value no matter how long they have been in use, while other engines depreciate so rapidly that after one or perhaps two years of real service, as given them in fishing boats, they are useless and ready for the scrap heap.

Of course the engine must be accessible, for if it is not, the operator finds it too easy to neglect simple adjustments on the score that it was not easy to get at, or that special tools were required to make the adjustment.

For fishing purposes it is necessary that the reverse gear, if any is used, be rugged and of a size large enough to insure a good big margin of safety and yet require as little space as consistent with good engineering design, for it must go into a space usually narrow and, many times, with only just enough depth to allow the gear to clear the keelson. Like all other important parts on a well-designed engine the reverse gear must be accessible in order to allow the necessary adjustments to be made easily and quickly. The gear itself should be simple and the adjustment should be of a kind easily understood and not requiring too much attention.

In selecting an engine for a fishing boat or any other type of vessel, not only the engine itself should be considered, but it is just as important to consider the manufacturers

and the local distributors. Has the manufacturer had experience in building engines for the particular purpose that is required? Is he well established and reasonably certain to continue in the business of manufacturing marine engines? There is nothing more disappointing than to purchase an engine for any kind of service and after a short period of use find that the manufacturer has either gone out of business or has discontinued the manufacture of engines.

Next to the standing of the manufacturer should be considered the distributor. Is he well established and liable to continue in the same line of business and to handle the engine considered? Has he a regular place of business, carrying spare parts and having capable men to assist in making necessary repairs and adjustments?

In these days of high cost of operation and low selling prices on fish products, the question of economy is perhaps more vital than ever before. There are three kinds of economy that should be considered, and while the first cost of the engine should not be lost sight of, it is not as important as the cost of operation, the cost of upkeep or repairs, and the loss of time in making repairs.

The cost of upkeep or repairs is in a measure dependent on the type of man in charge of the engine. A good man will reduce the cost of the upkeep at least one-half by making repairs as soon as they are needed and not neglecting them until they are so bad that it makes them difficult or perhaps impossible to make. Quite frequently the repairs are neglected until the part or parts that needed repairs have in turn damaged other parts, thus adding to the cost of upkeep. But if the engine is designed with the principal parts accessible, even the indifferent engineer is more liable to make repairs or adjustments when needed.

Freedom from repairs is just as much a factor of economy as low cost of operation, both from the viewpoint of actual outlay for repairs and also from the fact that while the engine is being repaired the vessel is not earning and a real loss is being charged up against the engine in addition to the actual cash expended for repairs.

If you select your engine by bore and stroke, crankshaft and bearing sizes, accessibility and economy, and make sure that it is backed by an established firm, you will not go far wrong in your choice.

### ARCTIC EXPLORER SELECTS OIL ENGINE POWER FOR CRUISE

THE auxiliary schooner "Bowdoin", to be used by Donald B. MacMillan on his cruise of exploration in the Baffin Bay country, was launched at East Boothbay, Me., on April 9th. This boat is equipped with every facility for insuring the success of her long and dangerous cruise, and rigid investigation was made of every detail of her equipment. It is interesting to note that an oil engine was selected as the most reliable form of power, a 45 H. P. Fairbanks-Morse "C-O" engine being installed.

On December 7th, 1919, another boat, the ketch "Ajax", also powered with an oil engine, a 75 H. P. "C-O", nosed out of Marblehead Harbor, Mass., bound for the South Sea Islands on an exploring and trade extension expedition. This project was under the direction of Mr. Herbert H. White of Boston.

In both these cases the dependability and performance records of this type engines were taken into very careful consideration. The fuel problem was also thought to be best solved by this form of power. The engines chosen use low-grade fuel oils. These oils are easy to handle and store, and inasmuch as long distances have to be covered without opportunity to take on fuel, it is far more satisfactory than coal which requires such a large storage place. This latter item is very important as everything is stowed snug on an exploring vessel and bulky commodities must be avoided. These two boats being equipped by men thoroughly conversant with the dangers of exploration work and the need for dependable power, speak volumes for the reputation of the chosen equipment.

Not only on boats of this type, but on work boats of every description in all waters, from little smacks to large auxiliary schooners, these engines are now being used in sizes from 30 H. P. to 300 H. P. One large New England fishing company uses 50 of them. Whole fleets are equipped with this reliable power.

The engines are of the vertical, multiple cylinder, two-stroke type, using crank case compression for scavenging. They use low-grade fuel oils, injected by means of a pump through a nozzle in such a way that the fuel is thoroughly "broken up". Thus it burns readily when coming in contact with the air heated by compression. A notable development in this particular make of engine is that the fuel is used without a water spray, and this feature practically eliminates the wear on both cylinders and pistons, greatly prolonging the life of the engine.

A sensitive governor controls the length of the fuel pump stroke, varying the quantity of oil injected in correct proportion to the load on the engine and maintaining a uniform speed. This governor is used in connection with a positive control arrangement enabling the operator to vary the speed from normal down to a fraction of a normal

speed. This feature makes the engine practically as flexible for negotiating tortuous streams, and for harbor navigation or making landings, as a steam engine.

Another big feature in this newer development is the absence of the "hot-bulb" or "hot-ball" method of combustion. This eliminates the troubles which result from overheated cylinder heads. The cylinder and combustion chamber are water cooled and no part of the engine is allowed to become overheated. The combustion chamber itself is separate from the cylinder in which the piston travels and no unburned fuel enters the cylinder proper. Thus the film of lubricating oil is not exposed to the action of the raw fuel and the flame of burning, and is not destroyed.

In starting these "C-O" engines an ignition device is heated almost instantaneously by current from a storage battery kept charged by the engine itself, after which compressed air is admitted to the proper cylinder and then every other cylinder in turn. The air admission valves are automatic, making the starting a very simple operation. The highest air pressure required is only 175 pounds.

Service records made by boats powered with "C-O" engines have shown big savings in fuel costs. Their makers call attention to the increasing number of them in use and the frequent cases in which they are replacing other forms of power as demonstrating conclusively their economy, reliability and adaptability to practical work boat power.

### NO SEAPLANE FOR GLOUCESTER

#### Navy Department Completed Its Mission in Proving Success of Experiment, It Points Out

The efforts made by the Master Mariners' Association and the Vessel Owners' Association in their attempt to secure from the government at Washington a seaplane for use in the mackerel fisheries has not been successful.

It appears from the correspondence between Secretary of the Navy Denby and Secretary of Commerce Hoover that the Navy Department proved through experiments carried on last year that the seaplane could be used in locating schools of fish. Having completed this work the Navy Department does not believe it to be part of its work to continue such investigation, and for same to be paid for from its appropriation.

If the necessary effort had been put behind this project last year there is little doubt but that the fleet would have had the benefit of the airplane service because the Bureau of Fisheries and the Navy Department were ready to help the Gloucester fishermen at that time.

The points that had been selected to operate seaplanes from were Montauk Point and Chatham, but the Navy Department has abandoned both of these stations, and consequently has no base in this section at the present time.—Gloucester Times.

# LOBSTER NOTES

## ASKS FOR WINTER LOBSTER FISHING

The Hon. W. S. Fielding made a plea before the fisheries department at Ottawa on April 15 for a modification or complete abrogation of the regulations restricting the lobster fishing season. He spoke for his constituents of Shelburne County principally, saying that the absence of winter lobster fishing worked a very great hardship to the fishermen. He believed that his people could carry on a profitable fishing season during the months of November and December, when lobsters are very much in demand in the American market. This period, he claimed, was largely one of idleness for the fishermen of his section.

Mr. Fielding received the assurance of careful consideration of the matter from the officers of the fisheries department.

The following appeared recently in the Yarmouth (N.S.) Telegram:

To the Editor:

There seems to be a good deal of talk about getting from the Federal government permission to fish for lobsters during the fall months in certain sections of the Province in the place of the spring months as at present, claiming that the prices would be higher in the United States markets than in the spring months. While this might suit some places, it would not others, as the fall trawling is better financially for the had-dock than at any other season.

If our fishermen had insisted that no lobsters under 10 or 10½ inches be permitted to be saved during the last 20 or 25 years there would today be no reason for our government only allowing a three-months' fishing for this crustacean. Our fishermen would have been able to fish all the year round as in Maine, instead of only three months as at present. But you allowed the cannery to ruin the very best fishery that any country ever had and you have foolishly helped them to do it. Now do not kick. You are only reaping the harvest of a destructive policy insisted on by yourselves—killing the goose that laid the golden egg.

E. C. Bowers

Westport, April 21, 1921.

Canso's waterfront presents a busy scene these days. The opening of the lobster season for that district, which began on April 20, found lobstermen waiting to drop their traps. There is no evidence that there will be any danger from drift ice this season, and more fishermen than usual are engaged in lobster fishing this year. Buyers as yet do not guarantee a price, but while it is not expected that prices will rule as high as last season, it is believed that they will be such as to make the business profitable.

More lobsters were taken and more cash was received during the month of March by the fishermen using the waters of Digby Municipality than during the two months of March and April last year. During March the cash receipts were over \$57,000, and the total receipts for the whole season last year were about \$95,000.

Two firms will pack lobsters on Cape John, N. S., this season—Burnham & Morrill and Maritime Packers. This industry is of great help to River John, furnishing as it does employment for upwards of 100 people, also giving work during the winter to many making traps and also building boats for fishing. Matthias Gratto & Son have about completed a number of boats for Burnham & Morrill's lobster factory. These boats are beautiful models, well finished and all lined up ready to take the water.

Maine lobster wardens at their annual conference at Rockland agreed that with the ample authority provided at the recent session of the legislature stricter enforcement of the lobster law will be possible. The announcement was authorized that the fast patrol boat Enterprise will be kept in commission through the summer.

The lobster fishermen of LaHave Islands, N. S., reported very fair fishing recently, but the price this season is considerably lower than last year, at the present time being 12 cents per pound for nine-inch lobsters and over, and five cents per pound for small.

## SOME P. E. I. PACKERS LOSE

The lobster situation this spring looks decidedly unhelpful for a number of Prince Edward Island packers, while others are looking forward to a brisk season. For those packers who held their fish last spring, and did not sell promptly, the situation is bad indeed, for these fish for lack of pickle in the cans turned black and are in such condition that they cannot be sold. Consequently the unfortunate packers will probably be unable to operate this year because of failure to realize on packs in their hands.

The packers who sold promptly last season are in a better position to begin operations than for a year or two. With the large amount of last year's pack that cannot be sold, the market will be in a better condition to receive new supplies, and at a better price.

The present season opened unusually early, which means an abundant supply of herring bait and early fishing. Supplies this year are 20 to 30 per cent. lower for bait and cages than last year.

Although the Prince Edward Island lobster season only opened April 26, the first of the lobsters of the season were on sale in Charlottetown the next day at 25 cents per pound. One thousand pounds of lobsters were landed at Souris from a small number of traps, the lobsters running quite large in size. C. F. Miller, lobster packer of Victoria, came to Summerside by motor boat, and reports that he dropped 190 traps to the bottom, and 15 hours later overhauled some and landed 53 large ones. Mr. Miller feels that lobsters will be plentiful this season.

The year 1920 was a successful one for the Maritime lobster fishermen, the total catch amounting to 160,000 cases, an increase of 30,000 cases over 1919. The value of the 1920 pack was \$5,500,000, an increase of \$1,000,000 over the previous year. The export of live lobsters to the United States was 20 per cent. over 1919, whilst exports to England and Scandinavian countries were heavy.



# MAINE NOTES

## A GIANT HALIBUT

A 300-pound halibut, said to be the largest ever caught in Penobscot Bay, was brought to port recently by Captain Melvin B. Webber, who landed the big fish unaided in his power boat at Junkins Ledge near Green Island.

A tremendous sag on his handline acquainted the veteran fisherman with the fact that he was on the verge of making an unusual catch. Presently the fish came to the surface, blowing, Captain Webber says, like a whale, and he saw that the halibut was choking in an attempt to swallow a large codfish which had been hooked while taking the bait. Captain Webber fought nearly 10 minutes before he beat the monster fish into a state of insensibility with his gaff.

How to get the creature into the boat was a problem, which a rough sea helped Captain Webber to solve. Maneuvering skillfully he finally dragged the fish over the rail, and proceeded to Rockland with the biggest catch, in more senses than one, that he had made for many a day. Choked and beaten the fish still had fight left in him, and flopped about vigorously when hoisted onto the wharf. The fish was exhibited to hundreds of sightseers, and when finally cut by Captain Webber found a ready sale at 25 cents a pound, one-half of the halibut being purchased by the proprietor of Hotel Rockland in anticipation of the unusual demand for food made by the Shriners' Day visitors.

The average halibut caught in these waters weighs from 75 to 100 pounds.—Rockland Courier-Gazette.

Director Crie, of the Sea & Shore Fisheries Commission, is sending out the following letter to the lobstermen of Maine soliciting their co-operation in the interests of the State lobster fishery:

Brother Fisherman—Why isn't this a good time of the year to start right? The two years just passed have demonstrated beyond a doubt that if the lobsters are protected they will increase under the present law. You are just about to start fishing this season. Why don't we

all make up our minds to work together with but a single thought, and that thought to build a larger, a more profitable and a better industry?

The commission is ready to do all in its power to improve and develop the lobster business. You personally must do all you can to help us, for without your assistance we can do very little. If each one will do his part there will be no question about the future. The only way we can know if the lobsters are increasing is by a correct report of the number caught, the price per pound and the amount received; that is what we are anxious to know. If you will please fill out the cards we shall send you this season it will give us the desired information.

Thanking you for your co-operation in the past and trusting you will assist us in the future, I am,

Yours very truly,

H. D. Crie, Director.

## SEA PRODUCTS COMPANY BUSY

Anybody who thinks that Rockland, Me., isn't still on the fish map should have visited the Thorndike & Hix wharf April 15. Witness the following receipts recorded by the Sea Products Company:

Captain Teel's smack with 25,000 pounds of pollock from Matinicus. Captain Slater's smack from Vinalhaven, with 27,000 pounds of pollock. Captain Tolman's smack with 19,000 pounds of pollock from Vinalhaven. Sloop Bessie with 4,700 pounds of large cod. Small boat fleet with 16,000 pounds of cod.

The pollock were an unusually handsome lot, averaging 10½ pounds, while some of the cod tipped the scales at 65 pounds.

The company has just shipped two carloads of dried fish to Italy, and started the dryers April 19 on a contract which calls for the shipment of 100,000 pounds of dried fish to Italy. Recent shipments also included 70 barrels of sardine herring, going to Boston and New York, and a carload of boneless cod, consigned to Western points.

The Sea Products Company has had as high as 40 men on its payroll during April.

## EAST COAST COMPANY

Reorganization of the East Coast Fisheries Co. has been under discussion and will soon be brought before security holders and creditors. Early in June, it is believed, matters will have progressed sufficiently to lay definite proposals before those interested.

A single corporation may be formed to take over the properties of the two existing concerns. Capitalization will be determined by appraisal of the physical and other assets.

As a matter of fact insolvency has neither been charged nor proven as it was the new management under the lead of General Goethals who applied for the receivership.

Theoretically, the fishing industry presents a favorable opportunity for profitable operation, but one "out" with the East Coast project has been the lack of proper distribution facilities.

Litigation has started looking to the recovery from certain directors of approximately \$400,000, claimed to have been paid out in unearned dividends. Further recoveries may later be attempted from I. M. Taylor & Co. on account of the contract entered into between this firm and the East Coast Co. whereby the entire \$5,000,000 common stock of the Fisheries Co. was given in exchange for assets of doubtful value.

The Halifax steam trawler, Sir John French, Captain M. Colp, has been in at Portland with a couple of large trips since she left her home port for the banks, the last one weighing out 250,000 pounds.

The closing of the G. H. Lyon & Son boneless herring factory at the south end of Eastport was celebrated by an old-fashioned cabbage supper. This concern furnished employment for between 40 and 50 women and men for several months. Resolutions of thanks and appreciation were passed and tendered Mr. G. H. Lyon and his son.

Walter Tolman, while seining for pollock off Vinalhaven, took in his nets a beautiful 26-pound salmon, which was later put on display in Rockland.



# MAINE SARDINES

## MOVE STOCKS FIRST

### Plants Not to Open Until Stocks Are Reduced—Believe Prices Have Touched Bottom

Sardine packers in the vicinity of Eastport and Lubec, as well as others scattered along the Maine coast, believe the only cure for the low prices and lack of demand prevailing for their product is to keep their factories closed until the stocks of goods now on hand are cleaned up and until there is a material improvement in prices.

Present prices for sardines are not only far below the cost at which the present stocks were canned in 1920, but are materially below the cost of canning them this season. Recent advances have been noted in the prices of certain materials required for packing, so that costs are now higher than was the case a few weeks ago. Cottonseed oil, which could have been bought for 45c per gallon on April 15th, now costs about 60c per gallon delivered to the factories in Eastport. These figures are for carload lots and smaller quantities would command a higher price.

Considerable quantities of sardines have been moved during the last few weeks and certain classes of standard goods are now practically cleaned out of the hands of the Eastport packers. Some packers are now obtaining goods from others in order to fill their orders.

In view of the above conditions it appears probable that prices have about touched bottom. Stocks in the hands of wholesalers and retailers are believed to be low.

### SARDINE SEASON OPENS—THAT'S ALL

#### Only One Factory on Entire Maine Coast Takes Fish

The most discouraging opening the sardine industry has experienced in years, was that which was inaugurated on April 18, when of all the fifty-six factories on the Maine coast, owned by forty separate concerns, only one, that of the Holmes Co. in Robbinston, took fish. This enterprising concern, which in the last

four or five years has rapidly come to the front and is now recognized as a leading factor in the business, is ready and apparently willing to run to capacity. They took 37 hogshead of herring April 18, paying \$5.00 per hogshead, the supply coming from Back Bay. There is an abundance of herring in Quoddy, but very few weirs are up, the weirmen not being greatly interested under the circumstances now obtaining. With herring at this low figure, labor lower and lower costs of oil, tin and other supplies, it looks as if the Holmes Company may be able to make a price on sardines that will enable it to run to capacity, there being no competition on new goods. The situation is being watched with interest by weirmen, packers and dealers alike.—Eastport Sentinel.

### PRICE SLUMPS TO \$2.50

#### Quotations Drop on Old Goods—Holmes Company Only Concern Operating—Packers Meet for Consultation.

The cut in the price of last season's pack of sardines, that has been expected to occur with the advent of new goods on the market, was made recently, the basis being now the very reasonable figure of \$2.50 per case of keyless quarter oils. Shipments are somewhat more brisk at this price and not only are stocks being reduced, but rumors are current to the effect that preparations are being made by several concerns to begin packing.

The Holmes Company continues to be the only active packer on the Maine coast, and is both taking plenty of fish and making heavy and continuous shipments of the goods they are putting up. Nothing definite is known as to their selling price, but it is certain that they are operating under lower costs than those prevailing last year.

Among other items cottonseed oil has dropped from 21 cents per pound in 1920 to 8 cents this year, and inasmuch as there are 7½ pounds in a gallon, this means a difference of about a dollar per gallon—a saving of from 65 to 75 cents per case of packed goods. Fish are

offered by the few weirs now in operation as five dollars per hogshead, as against an average of \$7.50 last year. Tin plate has dropped from \$7.75 to \$6.50 per base case, a difference of about twelve cents per case of cans. Coal is \$15 per ton. Labor has been cut from 40 cents per hour to 30 cents, and there are other minor savings all along the line.

A meeting of packers was held at the Association rooms in the Acme Block last Wednesday afternoon, concerning which a more detailed statement may appear elsewhere in this issue, depending on whether one is issued by the secretary.

It is reported, however, that the discussion took a wide range, varying from the general situation and the effect of the opening of one shop thereon, to the advisability of establishing a co-operative selling agency, with headquarters here in Eastport.—Eastport Sentinel, April 23.

### SARDINE QUOTATIONS

F. O. B. Eastport

|                           |        |
|---------------------------|--------|
| ¼ Oil Keyless.....        | \$3.00 |
| ¼ Oil Key.....            | 4.15   |
| ¼ Oil Key Carton.....     | 4.50   |
| ¼ Tomato Key.....         | 5.50   |
| ¼ Mustard Keyless.....    | 3.40   |
| ¼ Mustard Key Carton..... | 4.50   |
| ¾ Mustard Keyless.....    | 3.25   |
| ¾ Mustard Key.....        | 4.15   |

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The producing end of the American Can Company's plant at Lubec, Maine, closed Tuesday for an indefinite period, owing to the uncertainty in the sardine business and the lack of demand for the product. Several men, including the machinist force and salaried employees, are retained, and while there is nothing known as to when operations will be resumed, it is hoped that not many weeks will elapse before there will be some resumption of operations that will make a larger crew necessary.

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William L. Jewers, representing the Seacoast Canning Company, is traveling in Maine and New Hampshire introducing their various brands of sardines.

# Newfoundland and the Provinces

## REGULATIONS TO BE RESCINDED

### Newfoundland Confident of Improvement in Situation

THE Minister of Marine and Fisheries of Newfoundland recently announced that a bill for the repeal of the fish regulations would be forthwith passed in the Legislature, a decision that has been hailed with great satisfaction by the people of this dominion.

Since the present depression in the fish industry has been largely attributed to the government regulations, it is thought that their rescindment will lead to more confidence in the investment in the coming cod-fishery.

That the regulations failed of their purpose is generally acknowledged, though the Minister of Marine and Fisheries believes that they failed to work out as expected because of the intense opposition and criticism which has beset them from the outset.

## HERRING AT NORTH SYDNEY

The North Sydney fishing fleet is having great success in the fresh herring industry, nearly every boat returning with full fares after a brief time in pulling their nets. The rush of spring herring in the harbor of that port is as good as the best in recent years, and the quality of the fish was never better. Boats are taking as many as 20 barrels a day. Traps at Stann's are full and a number of bankers are getting supplies there. The fish have been retailing at 25 cents a dozen, but this price will not long remain. It is predicted that they will be selling for the old-time prices of 10 and 15 cents a dozen before long. Thomas Rogers and the Longez Brothers were the first North Sydney fishermen to catch herring. Mr. Rogers, on April 27, brought in about 390 pounds, while the Longez Brothers got about 220 pounds.

Some 6,000 pounds of dry fish were brought to North Sydney from Ingonish April 15 on the schooner Hawley Brothers, and so glutted the market that it was difficult to make a sale. One of the owners was willing to let it go for 7 or 8 cents.

Mr. J. M. Devine, Newfoundland Trade Commissioner, writes from New York that Newfoundland must try to sell more fish fresh than in the past, and that the old way of packing and shipping fish in bulk to a large extent must be gotten over.

From Big Pond, P. E. I., comes word of the death of Neil McPhee, better known as "Red Neil," after a short illness, which resulted from a shock while in Souris the day before. He was well known among the fishermen of the North Atlantic, and was held in high regard.

Donald H. Sutherland of Pictou has been appointed Inspector of Fisheries for the district of Antigonish, Guysborough, Pictou, Halifax, Colchester, Cumberland and Hants Counties, succeeding Robert Hockin, who has been the efficient and capable inspector for the past 32 years. Mr. Hockin is to be retained in an advisory capacity.

Good cod fishing is reported along the Bay of Fundy coast of New Brunswick, west of St. John, and large schools of sardines are making their appearance. The fishermen are continuing to make ready to build some of their weirs, but at present are quite skeptical regarding building them on account of the market for their catches, as the packers in a great many cases have not yet got clear of their old stock. Some of the Maine factories report that they will not open until July or August, but the factories on the New Brunswick side of the St. Croix are to open in May.

A large canning factory will be started at Wood's Island, Bay of Islands, Newfoundland, the coming summer, where lobsters, salmon and halibut will be put up in tins on a large scale for export. This industry will, no doubt, be a great boon to the fishermen in the vicinity, who will now find a ready market for their lobsters, salmon and halibut. T. Basha & Sons are behind the project and Mr. Geo. Corbage is the manager. Cash on the spot will be paid for all products.

## STEEL FISHING VESSELS

CONSIDERATION is at present being given by Lunenburg and other fishing ports of Nova Scotia to the possible advantages of substituting steel fishing schooners for the traditional wooden built type for deep sea fishing.

In the matter of insurance the steel built vessel has a much lower rate during the 25 or 30 years she is able to retain her classification. Insurance premiums on wooden vessels after their fifth year are so high as to be almost prohibitive. The saving in ballast is another point in favor of the steel vessel. Rock ballast costs from \$200 to \$300 to buy, haul and stow in a fishing vessel, which later must be thrown overboard, at great labor, as the fish are taken at the Banks. A steel vessel could be constructed with water ballast tanks.

Altogether, it seems to be the opinion of prominent men in the fishing industry that there is real need for a type of steel built, two-masted schooner fitted for deep sea fishing. It is understood that the Nova Scotia Steel & Coal Company is contemplating the construction of a vessel of this type. It is thought that the use of electric welding will not only cut the cost of construction, but such a method will give greater rigidity to the hull.

The Canadian government steamer Stanley has received orders from the Marine Department at Ottawa to undertake the duties of an ice patrol in the Cabot Straits. The patrol will be from Cape Ray to Bird Rock, Bird Rock to Heath Point, Anticosti and back to Cape Ray. The Stanley will keep all vessels posted as to ice conditions and will also transmit regular reports to the nearest radio station, which will relay them to all other stations in the vicinity, including Cape Race, Cape Ray, North Sydney, Grindstone and Fame Point.

The schooner Roseway, Captain R. L. VanArburg, returned to Yarmouth recently, and is now being repaired, cleaned and painted for the summer halibuting.

## ICELAND TRAWLERS COMING

## Plan to Operate Four Steamers this Summer as Experiment

STEAM trawlers from Iceland will, in all probability, be seen in operation from Canadian and American ports within a month or two. Mr. Thor Jensen, head of H. F. Knelduefur, one of the largest concerns in Iceland, is visiting the Provinces and Newfoundland for the purpose of looking into the advisability of engaging in the fish industry in American waters.

According to present plans four large steam trawlers will operate out of Cape Breton with headquarters at North Sydney. Advantage will doubtless be taken of the present virtual tie-up of Massachusetts trawlers, and the ports of Gloucester and Boston will probably receive many trips from these vessels. Already overtures have been made to Gloucester concerns for the handling of catches.

Should this year's experiment prove profitable the fleet will be increased next year to 30 trawlers. Other Iceland concerns will doubtless send their vessels to operate on this side if Mr. Jensen's venture proves successful. The plan is to operate the trawlers from Iceland during the winter, and from North American ports in the summer and fall season.

These Iceland boats, it is said, are staunch, husky, fast vessels of the latest type. Each will carry a crew of 40 to 50 men.

Schooner Alice Phoebe, Captain Dunphy, from Ingonish, ran past a thin pan of ice upon which there were, it is estimated, about 1,000 seals. Having no equipment for killing, they secured only five when a heavy fog came up, obliging them to leave.

According to reports a large number of Lunenburg men, who usually go to the Banks, will this summer devote their attention to farming. One Lunenburg vessel was lying at Halifax for a considerable time trying to recruit a crew.

Mayor Walker's fresh fisherman, Lewis H. Smith, Captain Peter LeBlanc, returned April 12 from her first halibut trip of the season, after being out about four weeks. Captain LeBlanc reports the trip somewhat long, owing to the fact that after

leaving Yarmouth he discovered that the vessel's compass was considerably out and he was compelled to go into Halifax for compass adjustment. That delayed her for some days, but after he got on the grounds he found fishing good and soon had the excellent fare of 25,000 pounds of halibut and 36,000 of cod, all of which was purchased by Mayor Walker. This schooner was formerly one of the Lunenburg salt bank fleet, and was purchased by H. A. Amiro of Yarmouth a year ago and continued in that fishing. Last winter Mr. Amiro sold the craft to her present owner, who at considerable expense fitted her into one of the most modern fresh fishermen to be found on the Nova Scotia coast, and her skipper with his entire crew report they are in every particular highly pleased with their new vessel.

Herring have at last struck in on the north side of Prince Edward Island, and some fair catches have been taken. Fishermen from that part of the island had supplies of these fish for sale in the market recently, which they were retailing at 40 cents per dozen. Fairly good catches are still being taken in Charlottetown harbor. P. C. Gallant, Summerside, landed 100 barrels in two days out of nine nets. The Annapolis fishermen are busy running their lines. Although the sea is quite rough they are out on the fishing ground with their motor boats.

The sealing steamer Viking, the only craft prosecuting the sealing industry in the Gulf, sailed for St. John's, April 15, from North Sydney. Captain Bartlett had 17,800 seals on board, which is believed to be the largest catch taken this year by any of the fleet in the northern waters, and makes him high liner of the season. He had a considerable quantity of seals panned, but owing to the bad weather which broke up the ice and cast afloat the pans, several thousands of pelts were lost.

Fearful of a possible tariff on herring exported to the United States, and having no market at home, the herring manufacturers of Grand Manan Island are doing something they have never done before. They are taking fine quality herring from the sticks as they hang in the bays of the smokehouses, and to save buying fertilizer are dumping them

on the land in preparation for farming this spring. Not for years has the herring market been so dull. The Magdalen business was given up entirely, and neither the American nor Canadian packers have any orders to speak of.

## A CLOSE CALL

Two Shelburne men, Calvin Ringer and Harry Firth, members of the crew of the American fishing schooner Esperanto, were rescued from drowning at Liverpool, April 11, by Michael Collins, second engineer of Dredge No. 1, and George C. Lyle of the Government tugboat *Loggar*. The *Esperanto* is the vessel that won the sailing race last fall from the Lunenburg fisherman *Delawana*, and was at anchor near the Brooklyn breakwater. Ringer and Firth left their ship in a dory with sail set to come up the river, and in the bad northeasterly storm the dory capsized upon the bar, filling with water, and became partially submerged. The occupants became benumbed from the cold and were unable to assist themselves. Their rescue being quickly effected with a boat, they were soon properly cared for, and felt no serious effects from the exposure.

The Gloucester fresh fisherman *Desire*, Captain John Jasson, arrived at Yarmouth, April 7, from LaHave Bank and hauled for about 5,000 pounds of halibut and about 6,000 pounds other fish, which was landed for shipment to Boston. The schooner left her home port some time ago and has since been seriously handicapped owing to the unfavorable weather. The *Desire* was in Liverpool for some days, and previous to making that port lost a considerable quantity of gear. Captain Jasson reported speaking the Yarmouth schooner *Patrick & Michael*, Captain William Murphy, on April 5, and that day she had made an excellent set, securing by it over 9,000 pounds of halibut.

The new schooner *Gen. Wood*, which has been sparred and rigged at Gloucester, was towed to Boston April 8 to load. She is for Newfoundland parties.

Reports from the Magdalen Islands indicate plenty of herring at Grindstone, Point Basse, Etand du Nord and Amherst, with no ice.





# FISHING SHIP NEWS




## GOES TO SEA AT 75

**A**FTER announcing his retirement at the age of 72, Captain Benjamin Cleveland of New Bedford has again answered the call of the sea, having recently assumed command of his whaling schooner, the William H. Graber.

Captain Cleveland, 75 years of age, feels that because of the low price offered for whale oil and the high price demanded by sailors, it is up to him to skipper his own vessel on a Southern whaling trip, which is expected to take a year or more.

Probably the two largest catches of oil ever brought into New Bedford have been brought in by vessels owned and commanded by Captain Cleveland. In 1907, after being out over 14 months hunting sea elephants, the Daisy, then commanded by Cleveland, returned with 2,400 barrels of sea elephant oil in her holds, along with 50 barrels of sperm oil. The voyage netted him over \$30,000 profit.

A month short of 10 years later Captain Cleveland again put into his home port with another record cargo of oil. This time he was in command of the 76-year-old whaling bark Charles W. Morgan, and the cargo of oil was valued again at \$30,000.

Captain Lomba, who commanded the William A. Graber on her last whaling trip, will this time go with the schooner as first officer. He has been a member of Cleveland crews for many years, and Captain Cleveland says that he would think as much of going to sea without a rudder as without Lomba.

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The United States Coast and Geodetic Survey announces the publication of a new chart, No. 1207, of Massachusetts Bay. This chart is one of the new series of coast charts on the Mercator projection and replaces chart No. 109 of the old series. It extends from Thacher's Island on the north to Cape Cod on the south and embraces the whole of Massachusetts Bay. The depths are expressed in feet at mean low water.

## FISHERMAN'S EXCITING EXPERIENCE

Howard Seeley, boat fishing for George R. Earl, is telling of a rather exciting experience he had a few days ago, and as a proof of what happened he brought to Yarmouth and landed, at Mr. Earl's wharf, a horribly mangled halibut, weighing about 150 pounds. Seeley was alone at the time fishing several miles out from Yarmouth Cape, and feeling something on his hook started to haul it in. As he did so he felt a terrific strain on the line as though whatever he had been attacked by some monster of the deep. The strain, however, was almost instantly released, but a moment later the same thing again occurred.

When he got his fish sufficiently near to the surface to ascertain what he had, he discovered it was a halibut and that it was being hotly pursued by a large shark. As Seeley pulled the halibut into the boat the shark appeared greatly enraged to find it was losing its prey, and made two vicious attacks at the small craft, driving fiercely at it, and twice striking it so hard that it was almost lifted from the water. Seeley realized that his position was decidedly a perilous one, as he did not know how long the shark would continue its onslaught or just what would become of him, as he was powerless, having nothing to ward off or protect himself from the monster.

The shark, however, after striking the boat the second time swam away and Seeley continued his fishing until the turn of the tide, when he returned to port. The halibut which the shark attacked was horribly torn, and showed where, at one plunge, a huge piece was gorged from its back and the fish torn to the tail, while at the other attack the shark caught the belly of the halibut and tore the fish practically apart.—Yarmouth Herald.

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Schooner Lizzie May has just been sold through the David W. Simpson agency. She will go to the Barbados.

## ROW 40 HOURS IN FOG

After rowing in a dense fog for 40 hours, with neither food nor water, Franklin Ladworth of Providence and Claude Perry of Boston, fishermen, landed their small dory at Peaked Hill Bars May 1. The men were nearly exhausted from their efforts, and were on the point of collapse from hunger and lack of sleep when picked up by coast guards.

They had rowed more than 100 miles, often in circles, after they had spent several hours in an effort to locate the Boston fishing schooner Funchale, from which they had put out April 28 on the Georges Banks. Unable to obtain their bearings in the fog, the men rowed for two days and nights, until hardly able to lift the oars. They told the life guards that they suffered intensely during the nights from the cold and rain.

The two men sighted the powerful beacon of Highland Light at about 6 o'clock the night of May 1, and made their way toward shore by that guide. They were noticed by life guards shortly after, and taken to the Peaked Hill station and given food and dry clothing. After obtaining a night's rest, the men left for Boston, apparently little the worse from their experience.

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Two lobster fishermen of Deep Cove Island had a somewhat trying time in their boat April 9. The weather being unfit for them to attend their lobster traps they attempted to come to Yarmouth for supplies, and left their island home just before the storm reached its worst. The fog was densely thick, and owing to the strong wind and a good sea they were unable to get hold of the sound of a whistle, nor could they locate a buoy to ascertain their true position. After going for some time they suddenly found themselves uncomfortably close to the breakers off Chebogue Point, but managed to escape that danger, and from that point they got their position and set their course for Yarmouth Cape, arriving in due time safe at Yarmouth.



Schooner *Sadie Nichol*, Lunenburg, on her way to St. Ann's to secure a supply of bait, ran hard and fast on the North bar May 3. The following day she came off of her own accord, none the worse for her experience.

Two Yarmouth fishermen, Robert D. McKay and Frank Owen, had a perilous experience April 30 while fishing between Gray's Island and Gull Rock. Unable to start their motor, they were pitched about at the mercy of the high seas which threatened to wreck their small craft. Fortunately they were seen by Beaumont Decker, keeper of McNutt's Island Light, who walked three miles to give the alarm. Two boats put off to the rescue, one containing Sydney Slate and the other Stanford Kenney and Freeman Atwood, who succeeded in rescuing the two fishermen. A dory and a tub of trawl were lost.

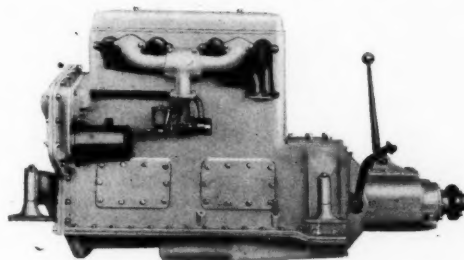
The *Eddie James*, H. A. Amiro's schooner, Captain Ansel Snow, had the misfortune to break her main boom on a recent trip to the Banks. She was compelled to return to port much earlier than planned. A new boom has been fitted by D'Eon Bros.

The schooner *Killarney* arrived unexpectedly at the South Boston fish pier May 3 to take off Chester Morrissey of Medford, a member of the crew, who was stricken with a hernia while trawling from a dory. When the schooner docked, an ambulance was awaiting, and Morrissey was taken to a hospital for treatment. The *Killarney* brought to the fish pier 43,500 pounds of haddock and cod, which were discharged before the schooner departed for the fishing grounds.

Shad fishing in the Delaware river took a big spurt the latter part of April, and many crews heretofore idle were out with their nets. This activity was due to the catch made by John Norton of Bridgeport, N. J., and his son, Charles. They were nearly pulled overboard in drawing in their net. They thought they had a sturgeon, but discovered they had a keg of wine.

The biggest mackerel day of April was on the 25th day, when nearly 40,000 pounds were landed by the netting fleet at New York and Cape May, N. J. Five of the Langsford and Pine boats were working from the New Jersey port.

**J. V. B.**



## JOSEPH VAN BLERCK'S LATEST MARINE ENGINE

4 3/4" Bore, 6" Stroke, Valve in the Head

28-40 H.P. 600-900 RPM

45-65 H.P. 1000-1450 RPM

Complete Equipment

\$1250

**Designed and Built for Work. It Will Reduce Your Fuel Bill and Save You Time**

The Southwest Fish Company of Vermillion, Ohio, Purchased Four Early Last Season and Have Just Secured Five More

Gray Aldrich Company, 84 Atlantic Avenue, Boston

Verrier Eddy Company, 222 East 42nd Street, New York

Have This Engine in Stock

### THE J. V. B. ENGINE CO.

Joseph Van Blerck, President

195 KENMORE BOULEVARD

AKRON, OHIO.

During the past two weeks there has been landed the usual quantity of fish from the several schooners fishing out of Liverpool. In spite of the low prices ruling, the men have shared fairly well. Changing from haddocking to halibuting will likely give these vessels a better return.

Schooner *Kaduskak*, owned by the Southern Salvage Company, has been making some good stocks this spring under the command of Captain Bert Payzant. Her last trip of 10 days she stocked \$100 per man, landing at Boston 84,000 pounds of halibut, cod and haddock. She was recently fitted out for halibuting and sailed for the fishing banks.

David Barry is superintending the building of the new steamer for the Bay of Islands Fisheries Co. at Summerside, Newfoundland. The vessel is now framed and several streaks of plank are on.

The best ten days' trip of fresh fish brought into Yarmouth this season was that of Henry A. Amiro's schooner, *Eddie James*, Captain Ansel Snow, which arrived May 5, and her owner purchased the fare. It consisted of 27,000 pounds of halibut, 8,000 of cod and 15,000 cusk. The vessel stocked \$5,390 and the crew shared \$158.20 each.

William F. McCoy, a Florida yacht builder, was in Rockland, Me., recently and bought from the East Coast Fisheries Company the fishing schooner *Arethusa*, which he will use for racing purposes. The *Arethusa*, formerly owner by Gorton, Pew & Co., is a sister to the *Esperanto*, which won the international fishermen's race last fall, and which is said to have outstripped the *Esperanto* on several occasions. The schooner has been used by the East Coast in bringing salt from Nova Scotia to Rockland.

Captain Ellery Thompson of the power boat Grace and Lucy, while trawl-fishing a half-mile south of Southwest Ledge Lighthouse, April 10, caught a torpedo in his net. The projectile was taken up to the submarine base. Captain Thompson will receive the usual reward of \$50 for his find. The torpedo is believed to have been lost from submarine E-1 nearly two years ago.

Shore Fishermen of Nova Scotia do not take kindly to the mackerel patrol idea. They claim the sending of government steamers to locate schools of mackerel when the fish are several miles off the coast is a sheer waste of money. It seems that the methods of disseminating information concerning the movements of the mackerel schools are at fault. Shore fishermen, who fish with traps and nets close to the shore, have not much chance of getting at the fish as reported unless the fish come close to the shore. With the seiners it is different, for they are equipped to fish off shore and can follow the direction the fish are taking as indicated by the wireless messages. It is thought that the present arrangement will be of greater benefit to the Gloucester fishermen, who are about the only ones that operate seiners in Nova Scotian waters.

Captain John A. Dahlmer is on a Southern mackerel trip in the converted yacht Orion. A Kahlenburg motor has been installed recently in this vessel.

Cod fishermen of Canso are making the usual spring preparations, although prospects are not good for favorable prices, especially for salt and dried fish. The early boats, however, will find a ready market for their catches in a fresh state and better things are hoped for as the season develops.

W. D. Sweeney's schooner, Grace & Ruby, Captain Wiley Ross, came into Yarmouth May 4 from a two weeks' fresh fish trip and sold the fare to Austin E. Nickerson, Ltd. It consisted of 29,000 of halibut, 41,000 of shack and the vessel stocked \$6,020.27, and the crew shared \$137 per man for the trip.

Seven netters arrived at New York May 6 with small fares, total receipts amounting to but 4,900 pounds of fresh mackerel.

Schooner Republic of Gloucester, Captain Peter Dunskey, did splendidly on a halibut trip the latter part of April, stocking \$5,393, while the crew shared \$167.21 each.

The biggest halibut stock of the early spring season, and one of the largest on record, was made the latter part of April by the schooner Marechal Foch, Captain Daniel McDonald, which weighed off 56,000 pounds of halibut at Portland. Besides this, the Gloucester craft had 15,000 pounds salt fish, stocking the fine total of \$10,272, from which each of the crew shared \$267. She was gone but 17 days.

Schooner Oretha F. Spinney, Captain Lemuel Spinney, Gloucester, stocked \$5,500 on a trip of halibut landed at Portland recently, and the crew received \$141.50.

The new schooner, John R. Erickson, built for New York parties by A. D. Story at Essex, was towed around to Gloucester April 30 to have her spars stepped at Burnham Brothers' shears.

Schooner Elk, Captain Carl Olson, on a recent halibuting trip stocked \$4,495, the crew receiving \$111.67 each.

Schooner Robert and Arthur arrived at a berth at the Boston fish pier May 4 with her colors at half mast because of the supposed loss of Isalah Hatch and Samuel Contreau of the ship's crew. Captain Douglas Malone learned upon reaching Boston, however, that the two men had rowed to the Pollock Rip Lightship and would be landed in Boston on the first available vessel. Captain Malone said that the missing dorymen had been hauling trawls in the South Channel April 29, when a heavy fog set in and the men disappeared from sight. The schooner cruised in the vicinity until the night of May 3, but could not locate the missing men.

Groundfish receipts at the Boston pier continue to fall behind last year. For the week ending April 14, 53 arrivals brought in 1,643,200 pounds of fresh fish, as compared with 67 arrivals and receipts of 2,468,700 pounds for the corresponding week of 1920. From January 1 to date, 828 arrivals have landed 37,405,700 pounds of fresh fish, while in the same period in 1920, 748 arrivals landed 39,776,800 pounds.

The K. & S. Shipping Co.'s schooner Patrick & Michael, Captain William Murphy, arrived at Yarmouth, April 17, from a 17 days' fresh fish trip and hailed for a fare of 30,000 pounds of halibut and 60,000 of shack. Captain Murphy reported conditions very unfavorable and for several days it was continuously northwest to southeast and south weather, which proved most detrimental to good fishing. He also reported dogfish playing havoc with the gear on the deep water grounds, so that all things considered his trip of fish was a good one. Captain Murphy spoke a large number of the Boston and Gloucester fresh fish fleet, all of which were encountering the same difficulties which he had met. He sold the fare to H. A. Amiro, Yarmouth South, for about \$7,000. The crew shared \$128 per man for the trip.

With a fleet of six seiners and 12 netters at New York on May 2, Fulton Market had its banner mackerel day of the early spring. Total receipts ran to 76,300 pounds, the seiners landing the bulk of the fish. Schooner Constellation, Captain Ambrose Fleet, had 20,000 pounds.

Steamer Arras of the fishery protection service, steamed recently from Shelburne to scout mackerel. The Arras is in charge of Captain Clement Barkhouse, a veteran in this service, and prompt reports of the first signs of mackerel on the Nova Scotian coast can be looked for.

#### SARDINES, 1919 AND 1920

On the basis of statistics collected by the Bureau, there were operated in 1919 in Maine 53 plants employing 5,463 persons. The value of the plants was \$3,764,875; cost of materials used was \$4,556,963; working capital was \$256,107, and wages paid aggregated \$1,685,409. The herring utilized amounted to 125,309,415 pounds, valued at \$852,450, and the pack was 2,450,268 cases, valued at \$11,935,568.

In 1920 the number of plants operated was 50, valued at \$3,816,388; the cost of materials amounted to \$3,907,878; the working capital was \$250,000, and the number of persons employed was 5,109, to whom \$1,787,402 were paid in wages. The herring utilized amounted to 104,700,010 pounds, valued at \$767,141, and the pack was 1,877,757 cases, valued at \$7,435,056.

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